EXHIBIT CI

FILED UNDER SEAL

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 13	Accused Instrumentalities
[13.0] A tangible, non-transitory computer readable storage medium including instructions for execution by a processor, the instructions, when executed, cause a control device to implement a method comprising:	Google's "Cast" technology enables an "Android, iOS, or Web app to direct its streaming video and audio to a TV or sound system," where the app "becomes the remote control to play, pause, seek, rewind, stop, and otherwise control the media." https://developers.google.com/cast.[1] In Google's "Cast" framework, there are two core categories of devices: (1) "sender" devices, which are computing devices installed with a Cast-enabled Android, iOS, Chrome, or browser-based app accessed via either an app store or Chromecast-enabled site URL[2] (including youtube.com, music.youtube.com, tv.youtube.com, and spotify.com) and (2) "receiver" devices, which are Cast-enabled media players such as an audio or video playback device. *See, e.g.,* https://developers.google.com/cast/docs/developers; https://developers.google.com/cast/glossary; https://developers.google.com/cast/docs/ux_guidelines. There are many different Cast-enabled Android, iOS, Chrome, or browser-based apps that allow a user to transfer playback of streaming media content from the user's smartphone, tablet, or computer device to a Cast-enabled media player and then control the Cast-enabled media player's playback using the Cast-enabled app. This includes Google's own Cast-enabled apps, such as the YouTube Music app, the Google Play Music app, the YouTube app, the YouTube TV app, and the YouTube Kids app, as well as a host of different third-party Cast-enabled apps, such as the Spotify app. *See, e.g.,* https://support.google.com/chromecast/answer/6279384?hl=en; https://www.google.com/chromecast/built-in/apps/. These Cast-enabled apps can be installed and run on any smartphone, tablet, or computer device that supports Android, iOS, Chrome, or browser-based apps, including Google's own "Pixel" smartphone, tablet, and computer devices (*e.g.*, the Pixel, Pixel XL, Pixel 2, Pixel 2 XL, Pixel 3, Pixel 3 XL, Pixel 3a, Pixel 3a XL, Pixel 4, Pixel 4 XL, Pixel 4a, Pixel 4a (5G), Pixel 5, Pixel 5a (5G), Pixel 6 phones, the Pixel Slate tablet, and the Pixelbook and Pixelbook Go laptops) as well as many third-party smartphone, tablet, or computer device. *See, e.g.,* https://store.google.com/us/magazine/compare_pixel; https://store.google.com/us/product/google_pixelbook_specs; https://store.google.com/us/product/pixel_slate_specs. For purposes of this chart, any smartphone, tablet, or computer device installed with a Cast-enabled Android, iOS, Chrome, or browser-based app (e.g., accessed via an app store or Chromecast-enabled site URL) that allows a user to transfer playback of streaming media content from the smartphone, tablet, or computer device to a Cast-enabled media player and then control the

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[1] Additional information regarding the accused instrumentalities is set forth in the Infringement Contention Chart for U.S. Patent No. 10,779,033 (Ex. B), which is incorporated herein by reference.
[2] *See, e.g.,* https://support.google.com/chromecast/answer/3265953?hl=en.

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Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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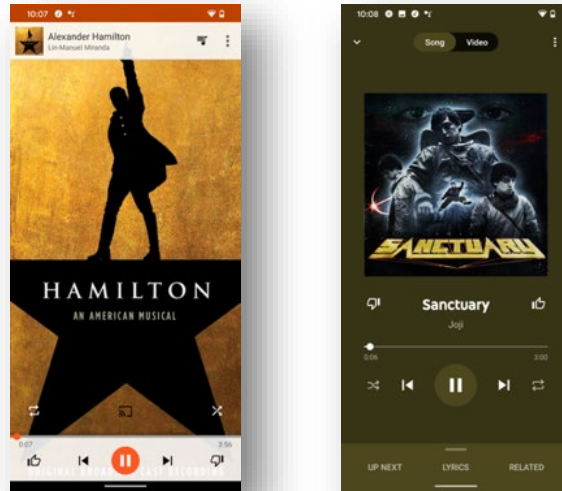| Claim 13	Accused Instrumentalities
	Cast-enabled media player's playback using the Cast-enabled app will be referred to as a "Cast-enabled computing device." As set out in the Supplemental Infringement Contentions, Sonos has endeavored to list the possible third-party smartphone, tablet, and computer devices that may have been used to download and install one or more accused Cast-enabled apps between May 2018 to present. *See* Appx. 1. Each of these third-party smartphone, tablet, and computer devices, when installed with at least one Cast-enabled app, meets all elements of the claims as explained in more detail herein. As set forth below, Sonos cites representative examples of Google smartphone, tablet, and computer devices that comprises a tangible, non-transitory computer-readable storage medium that, when installed with a Cast-enabled app, includes executable instructions that when executed by a processor causes the device to carry out the recited functions, but notes that this tangible, non-transitory computer-readable storage medium has become ubiquitous among all smartphone, tablet, and computer devices. Each possible third-party smartphone, tablet, and computer device listed in Appendix 1 contains this aspect and thus meets this element. There are also many different Cast-enabled media players to which playback of streaming media content can be transferred from a Cast-enabled computing device. This includes Google's own Cast-enabled media players, such as the Home Mini, Nest Mini, Home, Home Max, Home Hub, Nest Hub, Nest Hub Max, Nest Wifi Point, Chromecast, Chromecast Audio, Chromecast Ultra, Chromecast with Google TV, and Nest Audio media players, as well as various other third-party media players with built-in Cast functionality. *See, e.g.,* https://store.google.com/us/product/google_home_max?hl=en-US; https://store.google.com/us/product/chromecast_google_tv_compare?hl=en-US; https://www.google.com/chromecast/built-in/audio/. Certain of these Cast-enabled media players also include a display screen and firmware that enables the Cast-enabled media players to additionally function as a control device for other Cast-enabled media players. This sub-category of Cast-enabled media players, which will be referred to herein as "Cast-enabled displays," includes Google's Home Hub, Nest Hub, and Nest Hub Max media players. *See, e.g.,* https://store.google.com/us/product/google_nest_hub?hl=en-US#overview-modal-music; https://store.google.com/us/product/google_nest_hub_max?hl=en-US; https://support.google.com/googlenest/answer/9165738?hl=en. Similar to the Cast-enabled computing devices, these Cast-enabled displays have Cast-enabled software (e.g., firmware and/or Cast-enabled apps)

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Claim 13	Accused Instrumentalities
	that allows a user to transfer playback of streaming media content from the Cast-enabled display to another Cast-enabled media player and then control that other Cast-enabled media player's playback using the Cast-enabled display's user interface. For purposes of this chart, Cast-enabled computing devices and Cast-enabled displays may be referred to collectively as "Cast-enabled control devices." Google also hosts backend software on Cloud-based infrastructure owned and/or operated by Google (sometimes referred to as Google Cloud Platform or "GCP" for short) that facilitates the aforementioned Cast functionality for transferring playback of streaming media content from a Cast-enabled control device to a Cast-enabled media player and/or controlling the Cast-enabled media player's playback. As described in further detail below, each Cast-enabled control device is a "control device" that comprises a tangible, non-transitory computer-readable storage medium including executable instructions that, when executed by the Cast-enabled control device's processor, cause that Cast-enabled control device to perform the functions recited in claim 13. Further, each server that hosts at least one of the aforementioned Cast-enabled apps for download onto Cast-enabled computing devices, which is referred to herein as a "Cast-enabled app download server," comprises a tangible, non-transitory computer-readable storage medium including executable instructions that, when executed by a Cast-enabled control device's processor, cause that Cast-enabled control device to perform the functions recited in claim 13. Further yet, because each Cast-enabled media player is a data network device (*i.e.*, a device that is configured to connect to and communicate over a medium that interconnects devices in a manner that enables them to send digital data packets to and receive digital data packets from each other) and is configured to process and output audio, each Cast-enabled media player comprises a "playback device" as recited in claim 13. *See, e.g.*, Pl.'s Opening Markman Br. (D.I. 60 of 20-cv-881-ADA) at pp. 4-6, 23-26, Exs. 24-25; Pl.'s Reply Markman Br. (D.I. 66 of 20-cv-881-ADA) at pp. 2-3, 10-12, Exs. 26-27; SONOS-SVG2-00018184 - SONOS-SVG2-00018236 [ITC Order No. 20] at p. 15; https://support.google.com/googlenest/answer/7072284?hl=en; https://support.google.com/chromecast/answer/3046409?hl=en; https://store.google.com/us/product/nest_wifi_specs?hl=en-US.
[13.1] causing a graphical interface to display a control interface including one or more	Each Cast-enabled control device and each Cast-enabled app download server comprises a tangible, non-transitory computer-readable storage medium including executable instructions that, when executed by a Cast-enabled control device's processor, cause the Cast-enabled control device to cause its graphical interface to display a control interface including one or more transport controls to control playback by the Cast-enabled control device.

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Claim 13	Accused Instrumentalities
transport controls to control playback by the control device;	For instance, each Cast-enabled computing device is programmed with the capability to cause its graphical interface to display a control interface having one or more transport controls that, at times, are configured to control the Cast-enabled computing device's playback of audio content (e.g., music, podcasts, etc.) and/or audiovisual content (e.g., videos) from a streaming content service, among other media sources. *See, e.g.,* https://play.google.com/store/apps/details?id=com.google.android.youtube&hl=en_US&gl=US [Google Play Store – YouTube app] ("Get the official YouTube app on Android phones and tablets. . . . See what the world is watching . . . and watch on any device."); https://play.google.com/store/apps/details?id=com.google.android.apps.youtube.music&hl=en_US&gl=US [Google Play Store – YouTube Music app] ("Listen on your phone, desktop, smart speaker, smart TV, car, smart watch and within your favorite apps."); https://play.google.com/store/apps/details?id=com.google.android.apps.youtube.unplugged&hl=en_US&gl=US [Google Play Store – YouTube TV app] ("Watch on your smartphone, tablet, computer . . . ."); https://play.google.com/store/apps/details?id=com.google.android.apps.youtube.kids [Google Play Store – YouTube Kids app]; http://web.archive.org/web/20200927211448/https://support.google.com/chromecast/answer/6178107 [Listen to music with Google Play Music and Chromecast] ("Using your phone or tablet: [ ] You can use the playback controls on the Google Play Music app . . . Using your computer: [ ] You can use the playback controls on Google Play Music, near the bottom of the screen."); https://developer.android.com/guide/topics/media-apps/media-apps-overview?hl=ru [Media app architecture overview] ("A multimedia application that plays audio or video usually has two parts: . . . [a] UI with transport controls to run the player and optionally display the player's state"); https://developer.android.com/guide/topics/media/mediaplayer [MediaPlayer overview]; https://developer.android.com/reference/android/media/session/MediaController.TransportControls [MediaController.TransportControls]; https://developer.android.com/reference/android/media/session/MediaSession [MediaSession]; https://developer.android.com/training/tv/playback/transport-controls [Use Leanback transport controls]; GOOG-SONOSWDTX-00039778 [███████████████████████████████ ██ ████████████████]

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Claim 13	Accused Instrumentalities
	Under the plain and ordinary meaning of the term "multimedia," which is any type of media that comprises audio (including audio alone), audio content and audiovisual content are both examples of "multimedia content" as that term is used in claim 13. *See, e.g.,* Pl.'s Opening Markman Br. (D.I. 60 of 20-cv-881-ADA) at pp. 2-3; Pl's Reply Markman Br. (D.I. 66 of 20-cv-881-ADA) at pp. 1-2; SONOS-SVG2-00018184 - SONOS-SVG2-00018236 [ITC Order No. 20] at p. 15. Cast-enabled computing devices installed with various of Google's own Cast-enabled apps are programmed to perform this functionality, including but not limited to the YouTube, YouTube Music, YouTube TV, YouTube Kids, and Google Play Music apps, as illustrated by the following screenshots:

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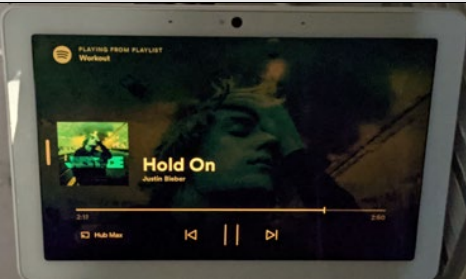| Claim 13	Accused Instrumentalities
	    Likewise, Cast-enabled computing devices installed with various third-party Cast-enabled apps are also programmed to perform this functionality, including but not limited to the Spotify app, as illustrated by the following screenshot:

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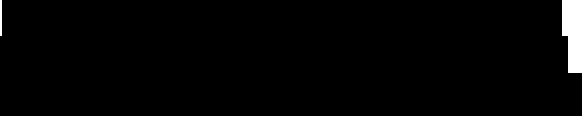| Claim 13	Accused Instrumentalities
	  Various other Cast-enabled apps available for installation on Cast-enabled computing devices provide similar functionality. *See, e.g.,* https://support.google.com/chromecast/answer/6279384?hl=en; https://www.google.com/chromecast/built-in/apps/. Each Cast-enabled display is also programmed with the capability to cause its graphical interface to display a control interface having one or more transport controls that, at times, are configured to control the Cast-enabled display's playback of multimedia content from a streaming content service, among other media sources. *See, e.g.,* https://store.google.com/us/product/google_nest_hub?hl=en-US#overview-modal-music ("YouTube Music on demand. . . . Stream top music services."); https://store.google.com/us/product/google_nest_hub_max?hl=en-US ("[J]am out with YouTube Music."); https://support.google.com/googlenest/answer/9165738?hl=en ("With YouTube built-in to your Google Nest display, you can watch YouTube Originals, how-to videos and much more, seamlessly on your screen."). Cast-enabled displays installed with various of Google's own Cast-enabled apps are programmed to perform this functionality, including but not limited to the YouTube, YouTube Music, and Google Play Music apps, as illustrated by the following photos:

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Claim 13	Accused Instrumentalities
	  Additionally, Cast-enabled displays installed with various third-party Cast-enabled apps are also programmed to perform this functionality, including but not limited to the Spotify app, as illustrated by the following photos:

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Claim 13	Accused Instrumentalities
	  Various other Cast-enabled apps available for installation on Cast-enabled displays provide similar functionality. Sonos further incorporates by reference Google's response to Sonos's Fact Discovery Interrogatory No. 15, including any of Google's documents or source code cited therein. *See* Google LLC's First Objections and Responses to Plaintiff Sonos, Inc.'s First Set of Fact Discovery Interrogatories.
[13.2] after connecting to a local area network via a network interface, identifying playback devices connected to the local area network;	Each Cast-enabled control device and each Cast-enabled app download server comprises a tangible, non-transitory computer-readable storage medium including executable instructions that, when executed by a Cast-enabled control device's processor, cause the Cast-enabled control device to, after connecting to a local area network ("LAN") via a network interface, identify Cast-enabled media players connected to the LAN. For instance, each Cast-enabled control device is programmed such that, after connecting to a Wi-Fi network via the Cast-enabled control device's Wi-Fi interface, the Cast-enabled control device is configured to identify one or more Cast-enabled media players connected to that same Wi-Fi network. *See, e.g.*, https://support.google.com/googlenest/answer/7181830 [Play media from Chromecast-enabled apps to your speaker or display] ("Make sure that your mobile device or tablet is connected to the same Wi-Fi network or linked to the same account as your Google Nest or Home speaker or display. . . . Tap the speaker or display for which you'd like to cast."); https://support.google.com/chromecast/answer/6279384?hl=en [Cast audio from Chromecast-enabled apps to speakers] ("Your mobile device, tablet, or computer must be connected to a Wi-Fi network to work. The device must be on the same Wi-Fi network as your Chromecast Audio or speakers with Chromecast built-in. . . . Choose your speaker."); https://support.google.com/chromecast/answer/2995235?hl=en-AU [Cast from the YouTube app and YouTube.com] ("Make sure that your mobile device or computer is connected to the same Wi-Fi network as Chromecast. . . . Tap the Chromecast device to which you want to cast.");

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Claim 13	Accused Instrumentalities
	https://support.google.com/youtubetv/answer/7353493?co=GENIE.Platform%3DAndroid&hl=en [Cast YouTube TV using Chromecast] ("Make sure your mobile device or tablet is on the same Wi-Fi network as Chromecast. . . . Tap Cast ⬚ . This is found at the top of the app Home screen. [ ]Choose the device you want to cast to."); https://support.google.com/youtubekids/answer/6289408?hl=en&co=GENIE.Platform%3DAndroid [Watch YouTube Kids videos on your TV]; http://web.archive.org/web/20200927211448/https://support.google.com/chromecast/answer/6178107 [Listen to music with Google Play Music and Chromecast] ("Connect your phone or tablet and Chromecast to the same wireless network. . . . Select your Chromecast device from the device list."); https://support.google.com/chromecast/answer/3265953?hl=en [Chromecast-enabled site vs. casting a tab]; https://support.google.com/googlenest/answer/9563059?hl=en-IN [Move media from one cast device to another] ("At the bottom-left corner of the screen, tap Devices ⬚ to see the list of available devices and speaker groups."); https://developer.android.com/reference/androidx/mediarouter/app/package-summary [androidx.mediarouter.app]; GOOG-SONOSWDTX-00038459 ███████████ ██████████████████████████████████████ Under the plain and ordinary meaning of the term "local area network," which is a data network (*i.e.*, a medium that interconnects devices in a manner that enables them to send digital data packets to and receive digital data packets from each other) that spans a limited area (e.g., home or office), a Wi-Fi network is a "local area network" as that term is used in claim 13. *See, e.g.,* Pl.'s Opening Markman Br. (D.I. 60 of 20-cv-881-ADA) at pp. 19-20, Ex. 24; Pl.'s Reply Markman Br. (D.I. 66 of 20-cv-881-ADA) at pp. 8-9, Ex. 27. Likewise, under the plain and ordinary meaning of the term "network interface," which is a physical component of a device that provides an interconnection with a data network (*i.e.*, a medium that interconnects devices in a manner that enables them to send digital data packets to and receive digital data packets from each other), a Cast-enabled control device's Wi-Fi interface is a "network interface" as that term is used in claim 13. *See, e.g.,* Pl.'s Opening Markman Br. (D.I. 60 of 20-cv-881-ADA) at pp. 3-4; Pl.'s Reply Markman Br. (D.I. 66 of 20-cv-881-ADA) at p. 2; SONOS-SVG2-00018184 - SONOS-SVG2-00018236 [ITC Order No. 20] at p. 15; https://support.google.com/googlenest/answer/7072284?hl=en; https://store.google.com/us/magazine/compare_pixel;

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Claim 13	Accused Instrumentalities
	https://web.archive.org/web/20171026161718/https://store.google.com/us/product/google_pixelbook_specs; https://web.archive.org/web/20201112032724/https://store.google.com/us/product/pixel_slate_specs. This functionality is evidenced by the screenshots shown below in connection with claim limitation 13.4, which demonstrate that a Cast-enabled control device installed with any one of the YouTube app, the YouTube Music app, the YouTube TV app, the YouTube Kids app, the Google Play Music app, or the Spotify app (among other Cast-enabled apps) functions to identify Cast-enabled media players connected to the same Wi-Fi network as the Cast-enabled control device. The evidence shows that a Cast-enabled control device makes this identification of the one or more Cast-enabled media players connected to the same Wi-Fi network as the Cast-enabled control device by performing one or more discovery processes (e.g., a Cast-based and/or DIAL-based discovery process). Representative examples of this evidence are summarized below. ***YouTube, YouTube Music, YouTube TV, & YouTube Kids apps*** Each Cast-enabled control device installed with any one of the YouTube, YouTube Music, YouTube TV, or YouTube Kids app is programmed to identify one or more Cast-enabled media players connected to the same Wi-Fi network as the Cast-enabled control device by performing one or more discovery processes, as demonstrated by the following exemplary evidence: • GOOG-SONOSWDTX-00039484 █████████████████

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Claim 13	Accused Instrumentalities
	        • GOOG-SONOSWDTX-00039813 [███████████]; • GOOG-SONOSWDTX-00039494 [████████████████████████ ████████████████████████████████████ at 94

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Claim 13	Accused Instrumentalities
	               • GOOG-SONOSWDTX-00040290 [█████████████]; • GOOG-SONOSWDTX-00039480 [█████████████████████ █]; • GOOG-SONOSWDTX-00039504 [████████████]; • GOOG-SONOSWDTX-00039091 [██████].

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Claim 13	Accused Instrumentalities
	Representative excerpts of Google's YouTube[3] and YouTube Music[4] app source code related to the aforementioned functionality include: ███████████████████████████████████ ███████████████████████████████████ • ████████████████████████████████ ██████████████████████████ ██████████████████ ██████████████ █████████████████████ Sonos further incorporates by reference Google's response to Sonos's Fact Discovery Interrogatory No. 14, including any of Google's documents or source code cited therein. *See* Google LLC's First Objections and Responses to Plaintiff Sonos, Inc.'s First Set of Fact Discovery Interrogatories. ***Google Play Music app*** Each Cast-enabled control device installed with the Google Play Music app is programmed to identify one or more Cast-enabled media players connected to the same Wi-Fi network as the Cast-enabled control device by performing one or more discovery processes, as demonstrated by the following exemplary evidence: • https://developer.android.com/reference/androidx/mediarouter/app/package-summary [androidx.mediarouter.app]; • http://web.archive.org/web/20200927211448/https://support.google.com/chromecast/answer/6178107 Listen to music with Google Play Music and Chromecast] ("Connect your phone or tablet and Chromecast to the same wireless network. . . . Select your Chromecast device from the device list."); • GOOG-SONOSWDTX-00037081 [██████████████████████████] at 83;

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[3] ███████████████████████████████
█████████████████████

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| Claim 13	Accused Instrumentalities
	• GOOG-SONOSWDTX-00043603 [███████████████████████████]; • https://www.youtube.com/watch?v=J2V0ITFzon4 [Chromecast: How to cast using Google Play Music]. Representative excerpts of Google's Google Play Music app source code[5] related to the aforementioned functionality include: ███ ███ ███████████████████████████████ • ███████████████████████████████████ ██████████████████████████████ █████████████████████████████████████ ████████████████████████████████ █████████████████████████████████ Sonos further incorporates by reference Google's response to Sonos's Fact Discovery Interrogatory No. 14, including any of Google's documents or source code cited therein. *See* Google LLC's First Objections and Responses to Plaintiff Sonos, Inc.'s First Set of Fact Discovery Interrogatories. ***Spotify app*** Each Cast-enabled control device installed with the Spotify app (which is Cast-enabled and utilizes the Cast SDK) is programmed to identify one or more Cast-enabled media players connected to the same Wi-Fi network as the Cast-enabled control device by performing one or more discovery processes, such as a discovery process facilitated by the Cast SDK, as demonstrated by the following exemplary evidence:

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[5] ████████████████████████████████████

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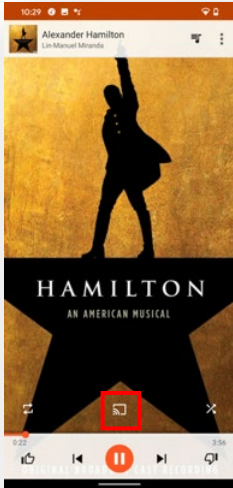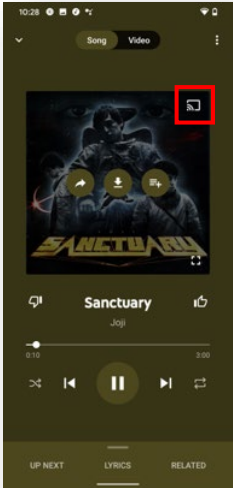| Claim 13	Accused Instrumentalities
	• GOOG-SONOSWDTX-00038459 [████████████████████████ ██ ████████], at 61; • https://support.google.com/chromecast/answer/6279384?hl=en [Cast audio from Chromecast-enabled apps to speakers] (listing Spotify as one of the "Chromecast-enabled apps"). Sonos further incorporates by reference Google's response to Sonos's Fact Discovery Interrogatory No. 14, including any of Google's documents or source code cited therein. *See* Google LLC's First Objections and Responses to Plaintiff Sonos, Inc.'s First Set of Fact Discovery Interrogatories. ***Cast-Enabled Displays*** Each Cast-enabled display is programmed to identify one or more Cast-enabled media players connected to the same Wi-Fi network as the Cast-enabled display by performing one or more discovery processes, as demonstrated by the following exemplary evidence: • GOOG-SONOSWDTX-00049676 [████████████████████████ ██ ████████████████] • https://support.google.com/googlenest/answer/9563059?hl=en-IN [Move media from one cast device to another] ("At the bottom-left corner of the screen, tap Devices ⤢ to see the list of available devices and speaker groups."). Representative excerpts of Google's source code[6] related to the aforementioned functionality include: ████████████████████████████████ ████████████████████████████████

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[6] ████████████████████████████

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Claim 13	Accused Instrumentalities
	███████████████████████████ • ██████████████████████████████████████ ███████████████████ ████████ ███████ ████████████████████ ███████████████████ ██████████████████████████ ███████████████████████████ Sonos further incorporates by reference Google's response to Sonos's Fact Discovery Interrogatory No. 14, including any of Google's documents or source code cited therein. *See* Google LLC's First Objections and Responses to Plaintiff Sonos, Inc.'s First Set of Fact Discovery Interrogatories.
[13.3] causing the graphical interface to display a selectable option for transferring playback from the control device;	Each Cast-enabled control device and each Cast-enabled app download server comprises a tangible, non-transitory computer-readable storage medium including executable instructions that, when executed by a Cast-enabled control device's processor, cause the Cast-enabled control device to cause its graphical interface to display a selectable option for transferring playback from the Cast-enabled control device. For instance, each Cast-enabled computing device is programmed with the capability to cause its graphical interface to display a selectable option (e.g., a selectable "Cast button") for transferring playback of multimedia content from the Cast-enabled computing device to another device (e.g., a Cast-enabled media player). *See, e.g.,* https://support.google.com/googlenest/answer/7181830 [Play media from Chromecast-enabled apps to your speaker or display] ("Tap the Cast button ⛶. . . . Tap the speaker or display for which you'd like to cast."); https://support.google.com/chromecast/answer/6279384?hl=en [Cast audio from Chromecast-enabled apps to speakers] ("In the top right corner, tap the Cast button ⛶."); https://support.google.com/chromecast/answer/2995235?hl=en-AU [Cast from the YouTube app and YouTube.com] ("Tap the Cast button ⛶. . . . Tap the Chromecast device to which you want to cast."); https://support.google.com/youtubetv/answer/7353493?co=GENIE.Platform%3DAndroid&hl=en [Cast YouTube TV using Chromecast] ("Tap Cast ⛶ . This is found at the top of the app Home screen. [ ]Choose the device you want to cast to.");

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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Claim 13	Accused Instrumentalities
	https://support.google.com/youtubekids/answer/6289408?hl=en&co=GENIE.Platform%3DAndroid [Watch YouTube Kids videos on your TV]; http://web.archive.org/web/20200927211448/https://support.google.com/chromecast/answer/6178107 [Listen to music with Google Play Music and Chromecast] ("Tap the Cast button ⧉. . . . Select your Chromecast device from the device list."); https://developer.android.com/guide/topics/media/mediarouter [MediaRouter overview]; https://support.google.com/chromecast/answer/3265953?hl=en [Chromecast-enabled site vs. casting a tab]. Cast-enabled computing devices installed with various of Google's own Cast-enabled apps are programmed to perform this functionality, including but not limited to the YouTube, YouTube Music, YouTube TV, YouTube Kids, and Google Play Music apps, as illustrated by the following screenshots:

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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| Claim 13	Accused Instrumentalities
	  See also, e.g., GOOG-SONOSWDTX-00039480 [███]; https://www.youtube.com/watch?v=J2V0ITFzon4 [Chromecast: How to cast using Google Play Music].

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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Claim 13	Accused Instrumentalities
	Likewise, Cast-enabled computing devices installed with various third-party Cast-enabled apps are also programmed to perform this functionality, including but not limited to the Spotify app, as illustrated by the following screenshot: Various other Cast-enabled apps available for installation on Cast-enabled computing devices provide similar functionality. *See, e.g.,* https://support.google.com/chromecast/answer/6279384?hl=en [Cast audio from Chromecast-enabled apps to speakers]; https://www.google.com/chromecast/built-in/apps/. Each Cast-enabled display is also programmed with the capability to cause its graphical interface to display a selectable option (e.g., a selectable "Cast button") for transferring playback of multimedia content from the Cast-enabled display to another device (e.g., a Cast-enabled media player). *See, e.g.,* https://support.google.com/googlenest/answer/9563059?hl=en-IN [Move media from one cast device to another] ("At the bottom-left corner of the screen, tap Devices 🔗 to see the list of available devices and speaker groups. . . . Select the device for which you want to move your media.").

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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Claim 13	Accused Instrumentalities
	Cast-enabled displays installed with various of Google's own Cast-enabled apps are programmed to perform this functionality, including but not limited to the YouTube, YouTube Music, and Google Play Music apps, as illustrated by the following photos: Additionally, Cast-enabled displays installed with various third-party Cast-enabled apps are also programmed to perform this functionality, including but not limited to the Spotify app, as illustrated by the following photo:

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

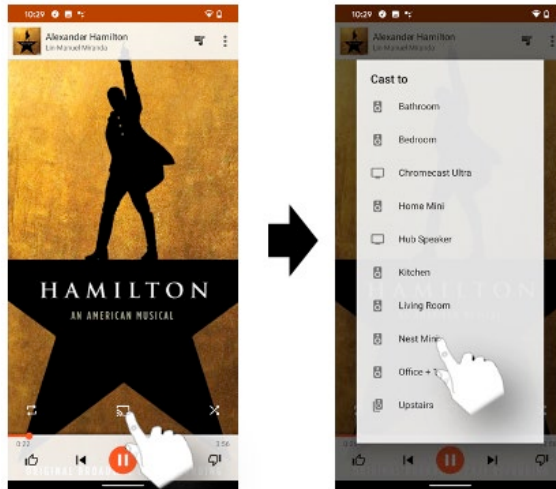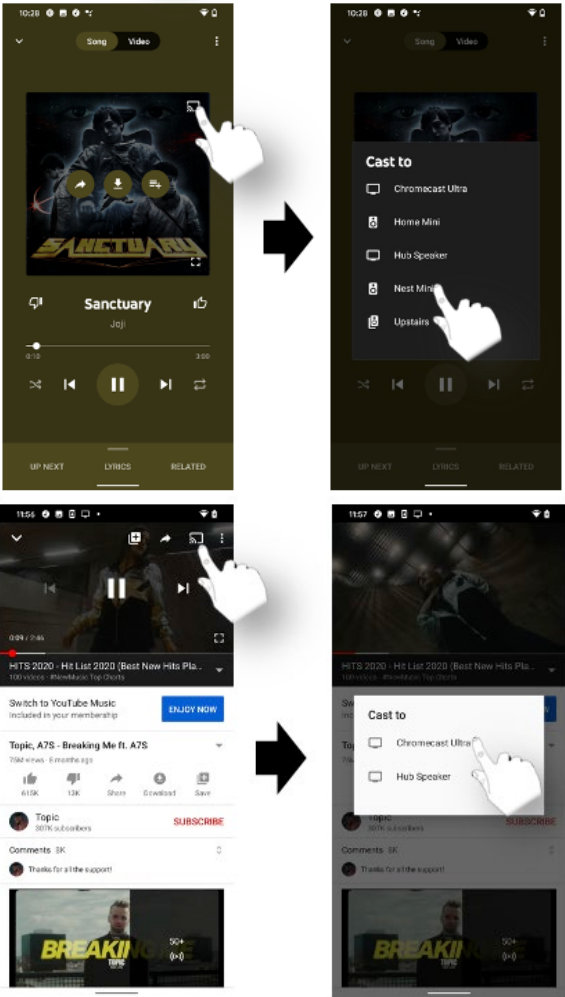| Claim 13	Accused Instrumentalities
	  Various other Cast-enabled apps available for installation on Cast-enabled displays provide similar functionality. Sonos further incorporates by reference Google's response to Sonos's Fact Discovery Interrogatory No. 14, including any of Google's documents or source code cited therein. *See* Google LLC's First Objections and Responses to Plaintiff Sonos, Inc.'s First Set of Fact Discovery Interrogatories.
[13.4] detecting a set of inputs to transfer playback from the control device to a particular playback device, wherein the set of inputs comprises: (i) a selection of the selectable option for transferring playback from the control device and (ii) a selection of the particular playback device from the identified	Each Cast-enabled control device and each Cast-enabled app download server comprises a tangible, non-transitory computer-readable storage medium including executable instructions that, when executed by a Cast-enabled control device's processor, cause the Cast-enabled control device to detect a set of inputs to transfer playback from the Cast-enabled control device to a particular Cast-enabled media player, where the set of inputs comprises: (i) a selection of the selectable option for transferring playback from the Cast-enabled control device and (ii) a selection of the particular Cast-enabled media player from the identified Cast-enabled media players connected to the LAN. For instance, each Cast-enabled computing device is programmed with the capability to (i) detect a selection of a displayed selectable option (e.g., a selectable "Cast button") for transferring playback of multimedia content from the Cast-enabled computing device to another device, which triggers the Cast-enabled computing device to display a list of available devices for transferring playback that includes one or more identified Cast-enabled media players on the same Wi-Fi network, and then (ii) detect a selection of at least one particular Cast-enabled media player connected to the same Wi-Fi network, which is the claimed "particular playback device" selected from "the identified playback devices connected to the local area network." *See, e.g.,* https://support.google.com/googlenest/answer/7181830 [Play media from Chromecast-enabled apps to your speaker or display] ("Tap the Cast button 📶. . . . Tap the speaker or display for which you'd like to cast."); https://support.google.com/chromecast/answer/6279384?hl=en [Cast audio from

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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Claim 13	Accused Instrumentalities
playback devices connected to the local area network:	Chromecast-enabled apps to speakers] ("2. In the top right corner, tap the Cast button ⧉. 3. Choose your speaker."); https://support.google.com/chromecast/answer/2995235?hl=en-AU [Cast from the YouTube app and YouTube.com] ("Tap the Cast button ⧉. . . . Tap the Chromecast device to which you want to cast."); https://support.google.com/youtubetv/answer/7353493?co=GENIE.Platform%3DAndroid&hl=en [Cast YouTube TV using Chromecast] ("Tap Cast ⧉ . This is found at the top of the app Home screen. [ ]Choose the device you want to cast to."); https://support.google.com/youtubekids/answer/6289408?hl=en&co=GENIE.Platform%3DAndroid [Watch YouTube Kids videos on your TV]; http://web.archive.org/web/20200927211448/https://support.google.com/chromecast/answer/6178107 [Listen to music with Google Play Music and Chromecast] ("Tap the Cast button ⧉. . . . Select your Chromecast device from the device list."); https://support.google.com/chromecast/answer/3265953?hl=en [Chromecast-enabled site vs. casting a tab]; https://developer.android.com/guide/topics/media/mediarouteprovider [MediaRouterProvider overview]. Cast-enabled computing devices installed with various of Google's own Cast-enabled apps are programmed to perform this functionality, including but not limited to the YouTube, YouTube Music, YouTube TV, YouTube Kids, and Google Play Music apps, as illustrated by the following screenshots:

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Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

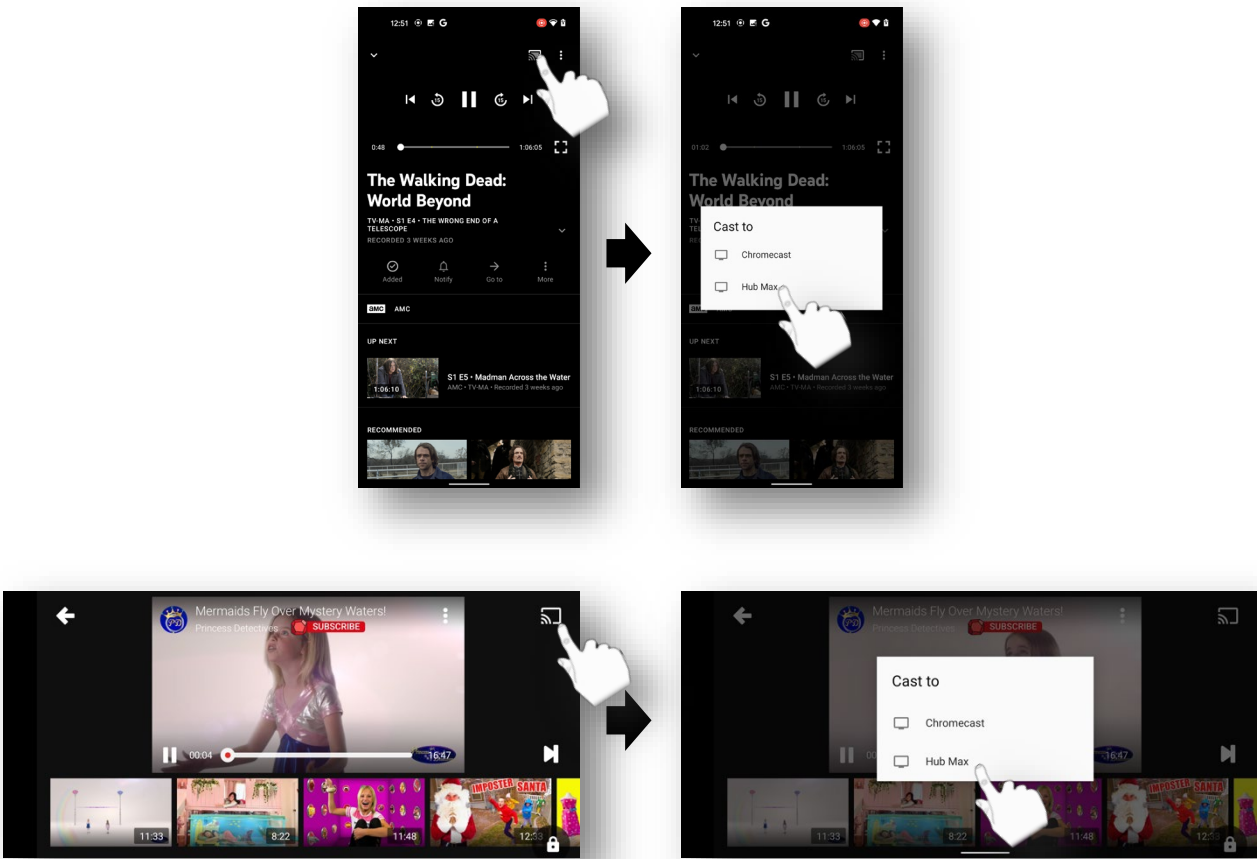| Claim 13	Accused Instrumentalities

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Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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Claim 13	Accused Instrumentalities

See also, e.g., GOOG-SONOSWDTX-00041491 [████████████████████████ ████████] at 93-95: |

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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Claim 13	Accused Instrumentalities
	              GOOG-SONOSWDTX-00039484 [███████████████] at 85:

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Claim 13	Accused Instrumentalities
	 GOOG-SONOSWDTX-00039494 [█████████████████] at 95:

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Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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Claim 13	Accused Instrumentalities
	        GOOG-SONOSWDTX-00042363 ▮ https://www.youtube.com/watch?v=J2V0ITFzon4 [Chromecast: How to cast using Google Play Music].

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Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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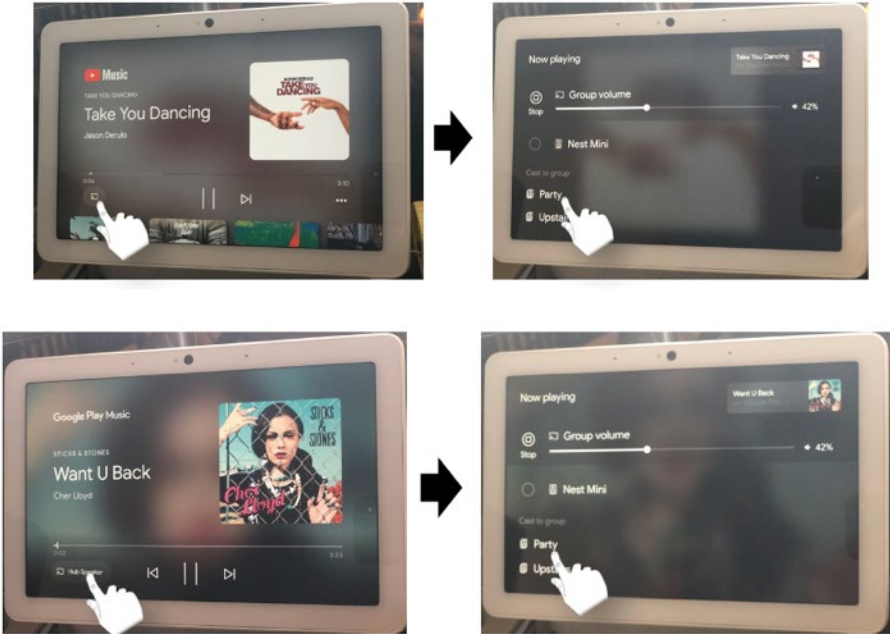| Claim 13	Accused Instrumentalities
	Likewise, Cast-enabled computing devices installed with various third-party Cast-enabled apps are also programmed to perform this functionality, including but not limited to the Spotify app, as illustrated by the following screenshots: Various other Cast-enabled apps available for installation on Cast-enabled computing devices provide similar functionality. *See, e.g.,* https://support.google.com/chromecast/answer/6279384?hl=en [Cast audio from Chromecast-enabled apps to speakers]; https://www.google.com/chromecast/built-in/apps/. Each Cast-enabled display is also programmed with the capability to (i) detect a selection of a displayed selectable option (███████████████████████) for transferring playback of multimedia content from the Cast-enabled display to another device, which triggers the Cast-enabled display to display a list of available devices for transferring playback that includes one or more identified Cast-enabled media players on the same Wi-Fi network, and then (ii) detect a selection of at least one particular Cast-enabled media player connected to the same Wi-Fi network, which is the claimed "particular playback device" selected from "the identified playback devices connected to the local area network." *See, e.g.,* https://support.google.com/googlenest/answer/9563059?hl=en-IN [Move media from one cast device to

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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Claim 13	Accused Instrumentalities
	another] ("At the bottom-left corner of the screen, tap Devices 🔗 to see the list of available devices and speaker groups. . . . Select the device for which you want to move your media."). Cast-enabled displays installed with various of Google's own Cast-enabled apps are programmed to perform this functionality, including but not limited to the YouTube, YouTube Music, and Google Play Music apps, as illustrated by the following photos:

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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Claim 13	Accused Instrumentalities
	  Additionally, Cast-enabled displays installed with various third-party Cast-enabled apps are also programmed to perform this functionality, including but not limited to the Spotify app, as illustrated by the following photos: Various other Cast-enabled apps available for installation on Cast-enabled displays provide similar functionality. Sonos further incorporates by reference Google's response to Sonos's Fact Discovery Interrogatory No. 14, including any of Google's documents or source code cited therein. *See* Google LLC's First Objections and Responses to Plaintiff Sonos, Inc.'s First Set of Fact Discovery Interrogatories.
[13.5] after detecting the set of inputs to transfer playback from the	Each Cast-enabled control device and each Cast-enabled app download server comprises a tangible, non-transitory computer-readable storage medium including executable instructions that, when executed by a Cast-enabled control device's processor, cause the Cast-enabled control device to, after detecting the set of inputs to transfer playback from the Cast-enabled control device to the particular Cast-enabled media player,

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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Claim 13	Accused Instrumentalities
control device to the particular playback device, causing playback to be transferred from the control device to the particular playback device, **[13.6]** wherein transferring playback from the control device to the particular playback device comprises: (a) causing one or more first cloud servers to add multimedia content to a local playback queue on the particular playback device, wherein adding the multimedia content to the local playback queue comprises the one or more first cloud servers adding, to the local playback queue, one or more	cause playback to be transferred from the Cast-enabled control device to the particular Cast-enabled media player, where transferring playback from the Cast-enabled control device to the particular Cast-enabled media player comprises (a) causing one or more first cloud servers to add multimedia content to a local playback queue on the particular Cast-enabled media player, where adding the multimedia content to the local playback queue comprises the one or more first cloud servers adding, to the local playback queue, one or more resource locators corresponding to respective locations of the multimedia content at one or more second cloud servers of a streaming content service, (b) causing playback at the Cast-enabled control device to be stopped, and (c) modifying the one or more transport controls of the control interface to control playback by the particular Cast-enabled media player. For instance, each Cast-enabled computing device is programmed such that, after detecting a set of inputs to transfer the Cast-enabled computing device's playback of multimedia content to at least one particular Cast-enabled media player connected to the same Wi-Fi network as the Cast-enabled computing device (which is the claimed "particular playback device"), the Cast-enabled computing device causes the playback of the multimedia content to be transferred to the at least one particular Cast-enabled media player, which involves the Cast-enabled computing device functioning to: • cause a first cloud server that is remote from the Cast-enabled computing device and the at least one particular Cast-enabled media player and accessible over the Internet (e.g., a first cloud server that is operated by either Google or a third-party service provider) to add resource locators for such multimedia content to a local playback queue of the particular Cast-enabled media player, where the resource locators correspond to locations of the multimedia content at a second cloud server that is remote from the Cast-enabled computing device and the at least one particular Cast-enabled media player and accessible over the Internet (e.g., a second cloud server that is operated by either Google or a third-party service provider), • stop its own playback of the multimedia content from the streaming content service, and • modify one or more transport controls of its control interface such that the one or more transport controls function to control playback by the at least one particular Cast-enabled media player rather than playback by the Cast-enabled control device. *See, e.g.*, https://support.google.com/googlenest/answer/7181830 [Play media from Chromecast-enabled apps to your speaker or display] ("When you're connected, the Cast button will turn from light to dark grey, letting

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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Claim 13	Accused Instrumentalities
resource locators corresponding to respective locations of the multimedia content at one or more second cloud servers of a streaming content service; (b) causing playback at the control device to be stopped; and (c) modifying the one or more transport controls of the control interface to control playback by the playback device; and	you know that you're connected."); https://support.google.com/chromecast/answer/6279384?hl=en [Cast audio from Chromecast-enabled apps to speakers] ("Once you're connected, you can cast music, radio stations, and podcasts directly to your audio device."); https://support.google.com/chromecast/answer/2995235?hl=en-AU [Cast from the YouTube app and YouTube.com]; https://support.google.com/youtubetv/answer/7353493?co=GENIE.Platform%3DAndroid&hl=en [Cast YouTube TV using Chromecast]; https://support.google.com/youtubekids/answer/6289408?hl=en&co=GENIE.Platform%3DAndroid [Watch YouTube Kids videos on your TV]; http://web.archive.org/web/20200927211448/https://support.google.com/chromecast/answer/6178107 [Listen to music with Google Play Music and Chromecast]; https://support.google.com/googlenest/answer/9563059?hl=en-IN [Move media from one cast device to another]; https://developer.android.com/guide/topics/media/media-routing [Routing between devices]; https://developers.google.com/cast/docs/web_receiver/queueing ("Queueing allows partner applications to better integrate with Cast by providing the following features: Support of Google's and partner's cloud queue implementation so externally stored and created queue can be directly loaded into Cast devices."); https://developers.google.com/cast/docs/ios_sender/queueing ("The Web Receiver SDK maintains the queue and responds to operations on the queue as long as the queue has at least one item currently active (playing or paused)."); https://developers.google.com/cast/docs/android_sender/queueing ("The Receiver SDK maintains the queue and responds to operations on the queue as long as the queue has at least one item currently active (playing or paused)."); https://developer.android.com/reference/java/net/URL [URL]. This functionality is evidenced by the screenshots shown below in connection with claim limitation 13.7, which demonstrate that a Cast-enabled control device installed with any one of the YouTube app, the YouTube Music app, the YouTube TV app, the YouTube Kids app, the Google Play Music app, or the Spotify app (among other Cast-enabled apps) causes playback of multimedia content to be transferred from the Cast-enabled control device to at least one particular Cast-enabled media player after detecting a set of inputs to perform that transfer.

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Claim 13	Accused Instrumentalities
	As noted above, Google's own documents acknowledge that each Cast-enabled media player (often referred to by Google as a "receiver"[7]) is programmed to maintain a local playback queue of one or more resource locators, each for multimedia content (e.g., a song or video) that is to be played back by the Cast-enabled media player. *See, e.g.,* GOOG-SONOSWDTX-00006873 [███] ; https://developers.google.com/cast/docs/ios_sender/queueing ("The Web *Receiver* SDK *maintains the queue* and responds to operations on the queue as long as the *queue* has *at least one item* currently active (playing or paused)."); *see also, e.g.,* GOOG-SONOSWDTX-00006613 [██] GOOG-SONOSWDTX-00006759 [████████████████████████ at 63: ██]

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[7] ██

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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Claim 13	Accused Instrumentalities

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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Claim 13	Accused Instrumentalities
	Further details regarding how a Cast-enabled control device carries out this functionality, along with representative examples of evidence demonstrating this functionality, are summarized below. ***YouTube, YouTube Music, YouTube TV, & YouTube Kids apps*** Each Cast-enabled computing device installed with any one of the YouTube, YouTube Music, YouTube TV, or YouTube Kids app is programmed such that, after detecting a set of inputs to transfer the Cast-enabled

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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Claim 13	Accused Instrumentalities
	computing device's playback of multimedia content to at least one particular Cast-enabled media player, the Cast-enabled computing device functions to: • ████████████████████████████████

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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Claim 13	Accused Instrumentalities
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Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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Claim 13	Accused Instrumentalities
	o Sonos notes that Google did not produce for review the source code defining ████████████████████████████████, but the code Google did produce indicates that ██[11] • ██ o Sonos notes that Google did not produce for review the source code ████████████████████████████ut the code Google did produce indicates that ████████████████████████████████████[12] o Sonos also notes that Google did not produce for review the source code █████████████████████████████but the code Google did produce indicates ████████████████████

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[11] ██

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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Claim 13	Accused Instrumentalities
	██████████████████████ [13] • ████████████████████ ████████████████████████ ████████████████████████ ████████████████████████ ████████████████████████ ████████████████████████ ████████████████████████ ████████████████████████ The aforementioned functionality collectively satisfies claim limitations 13.5-13.6. ████████████████████████ ████████████████████████ ████████████████████████

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[13] ██

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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Claim 13	Accused Instrumentalities
	██ ██ ██ ██ ██ Faced with this clear evidence of infringement of claim limitations 13.5-13.6, Google has now proposed brand new constructions for the terms "resource locator" and "local playback queue on the particular playback device," which Google appears to be pursuing for the sole purpose of attempting to avoid infringement of claim limitations 13.5-13.6. In particular, for the first time on January 10, 2022, Google took the position that the term "resource locator" should be construed as an "address of a resource on the Internet" and cited as support numerous dictionary definitions of the phrase "uniform resource locator" (URL). In this regard, Google apparently intends to argue that Cast-enabled computing device installed with any one of the YouTube, YouTube Music, YouTube TV, or YouTube Kids apps does not infringe limitations 13.5-13.6 under Google's proposed construction for "resource locator" based on a theory that the "████████ being added to a Cast-enabled media player's local playback queue is not an "address of a resource on the Internet." Sonos disagrees that this is the proper construction for "resource locator" as that term is used in the context of the '615 Patent and will provide its position regarding the flaws in Google's proposed construction during the claim construction process. However, even if the Court were to adopt Google's proposed construction, Sonos maintains that each Cast-enabled computing device installed with any one of the YouTube, YouTube Music, YouTube TV, or YouTube Kids apps would still satisfy claim limitation 13.6(a) literally, or at the very least, under the doctrine of equivalents (DoE). As noted above, a Cast-enabled computing device installed with any one of the YouTube, YouTube Music, YouTube TV, or YouTube Kids apps functions to cause one or more ████████████████████ ████████ to send a "████████" of a particular media item to a Cast-enabled media player, and the Cast-enabled media player then in turn uses the ████████ to retrieve, from one or more other cloud servers, one or more URLs corresponding to the particular media item, such that the other one or more cloud servers cause the

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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Claim 13	Accused Instrumentalities
	Cast-enabled media player to add one or more URLs corresponding to the particular media item to its memory. Thus, by virtue of causing one or more ███████████████████████ to a Cast-enabled media player's local playback queue, a Cast-enabled computing device installed with any one of the YouTube, YouTube Music, YouTube TV, or YouTube Kids apps likewise causes one or more cloud servers to add URLs to the Cast-enabled media player's memory ████████████████████████ ████████████████████████ – which are clearly "resource locators" under Google's new proposed construction. For this reason, Sonos maintains that the foregoing functionality would still literally satisfy claim limitation 13.6(a) even if the Court were to adopt Google's proposed construction for "resource locator." Moreover, to the extent Google intends to argue that the foregoing functionality does not satisfy claim limitation 13.6(a) literally under Google's proposed construction of "resource locator" based on a theory that the claims require the "control device" to ***directly*** cause a "first cloud server" to add a "resource locator" to the "local playback queue on the particular playback device" (which Sonos also disagrees with), Sonos contends that the foregoing functionality would still satisfy claim limitation 13.6(a) under DoE. ███████ ███

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Claim 13	Accused Instrumentalities
	██
	Also for the first time on January 10, 2022, Google took the position that the term "local playback queue on the particular playback device" should be construed as "a data structure within the particular playback device that maintains an ordered list of two or more multimedia items for playback in the listed order." During a meet and conferral, Google stated that its use of the phrase "a data structure" in its proposed construction is intended to cover only a *singular* "data structure"[15] that maintains two or more "multimedia items" and exclude a scenario involving multiple data variables, each that can store a single "multimedia item." In this regard, Google apparently intends to argue that a Cast-enabled computing device installed with any one of the YouTube, YouTube Music, YouTube TV, or YouTube Kids apps does not infringe limitations 13.5-13.6 under Google's proposed construction for "local playback queue on the particular playback device" based on a theory that the Cast-enabled media players do not have a *singular* "data structure" that maintains "an ordered list of two or more multimedia items for playback in the listed order."
	Sonos disagrees that this is the proper construction for "local playback queue on the particular playback device" as that term is used in the context of the '615 Patent and will provide its position regarding the flaws in Google's proposed construction during the claim construction process. However, even if the Court were to adopt such a construction for "local playback queue on the particular playback device," Sonos maintains that each Cast-enabled computing device installed with any one of the YouTube, YouTube Music, YouTube TV, or YouTube Kids apps would still satisfy claim limitation 13.6(a) literally, or at the very least, under DoE.
	██

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[15] Google was unable to articulate what it meant by the phrase "data structure" other than to say it excludes multiple data variables collectively. Sonos disagrees and contends that the phrase "data structure" is a general phrase in computer technology that encompasses an individual data variable, a collection of multiple data variables, a data array, and other multi-data constructs, among other examples.

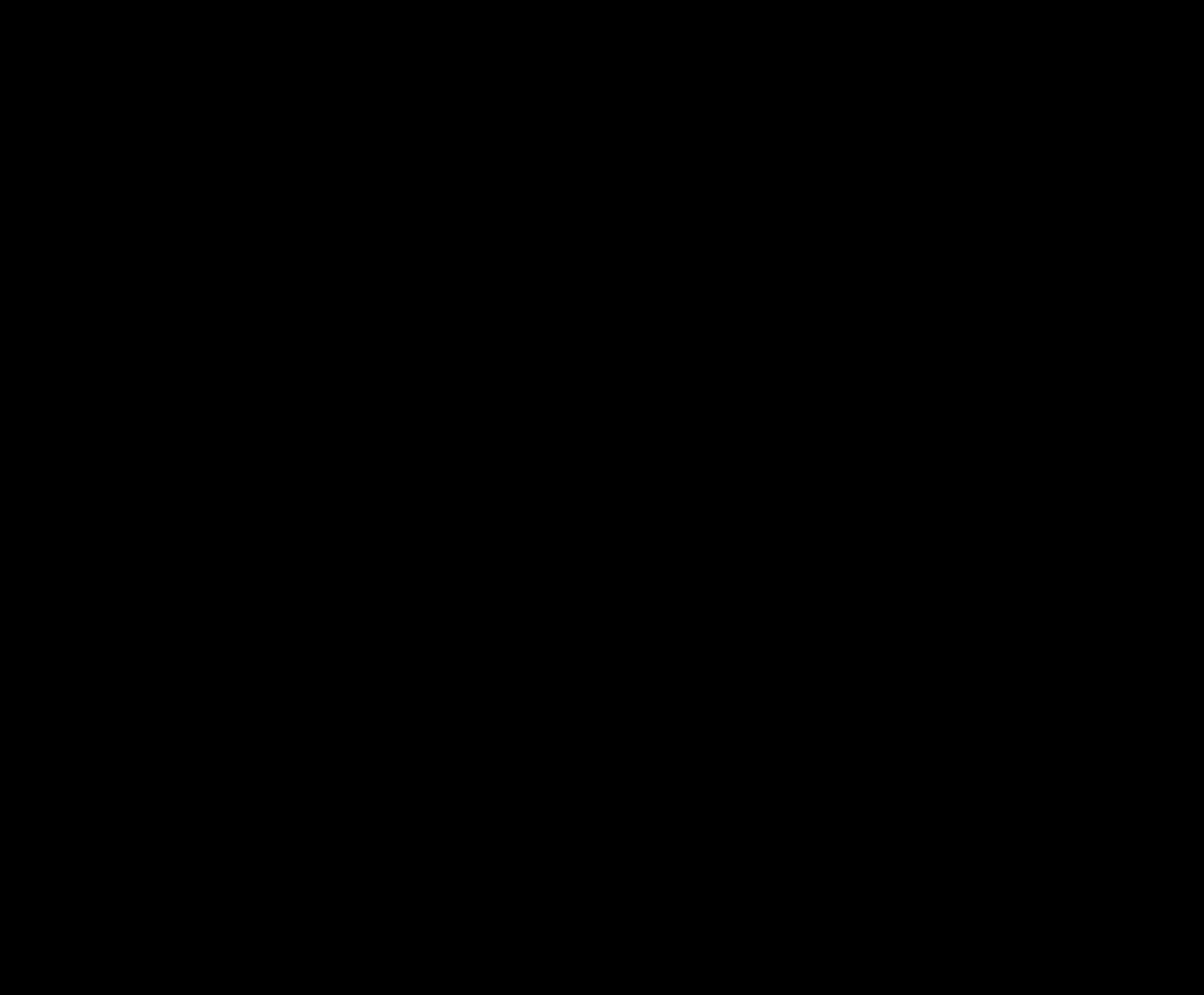[16] ██
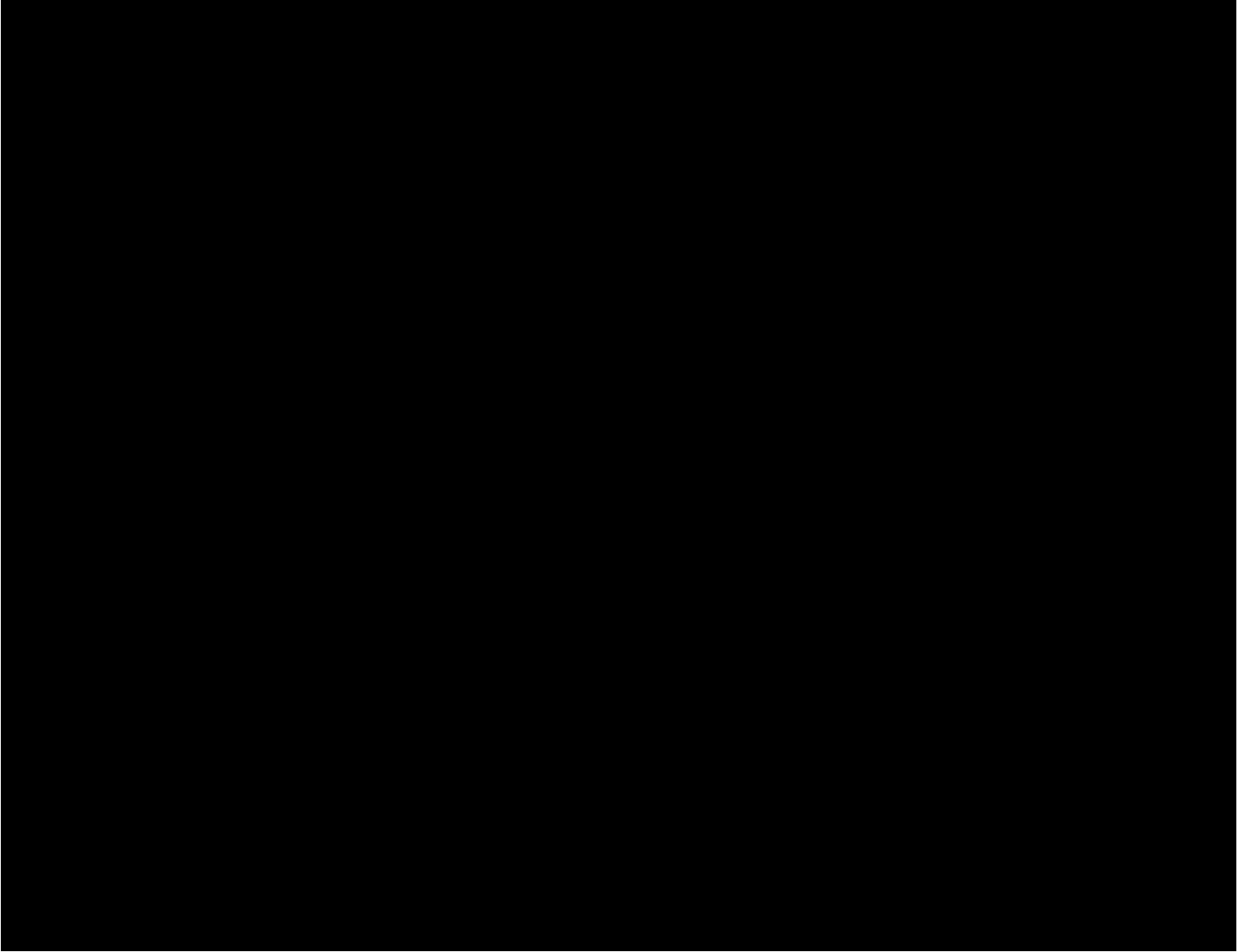
Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

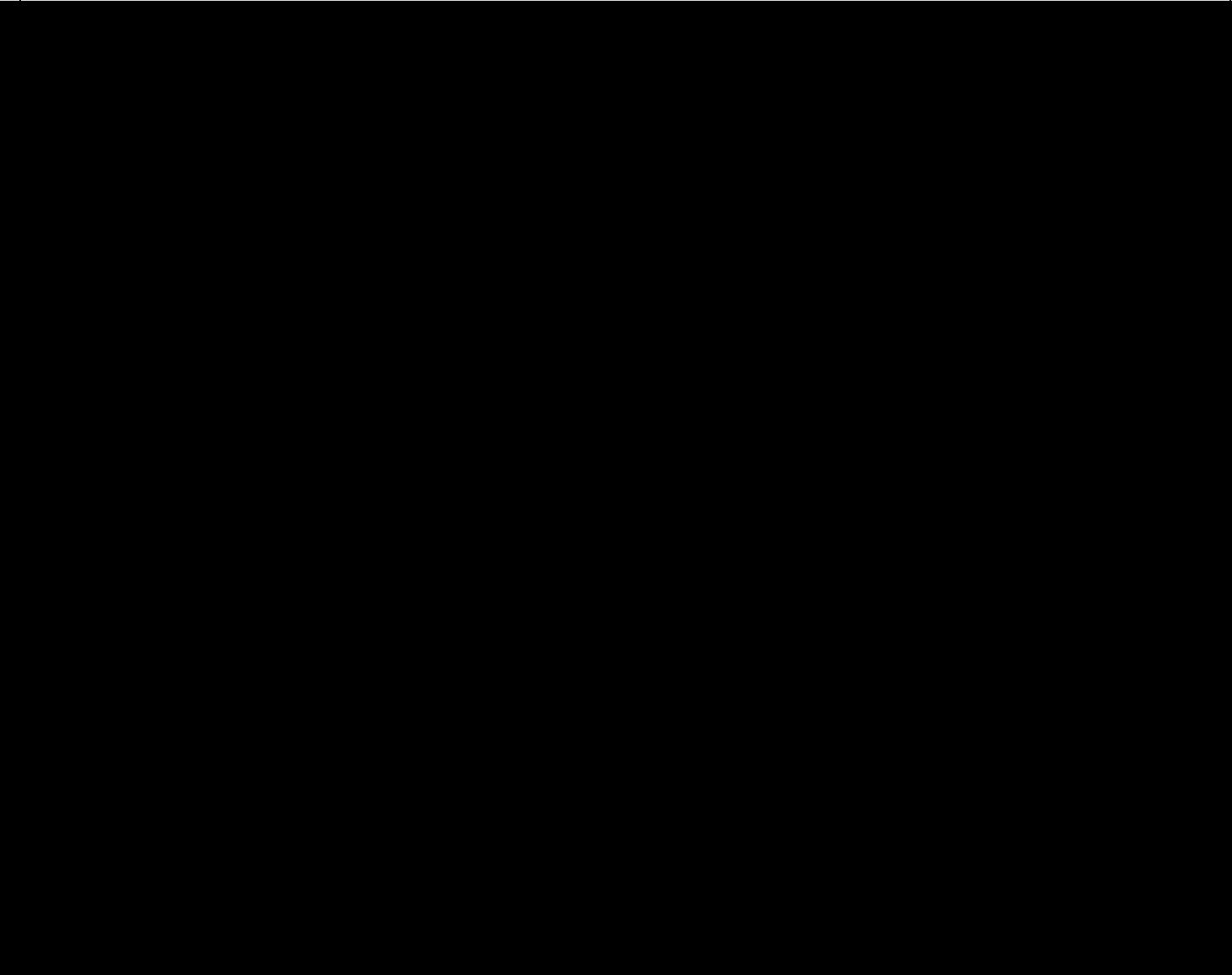| Claim 13	Accused Instrumentalities
	██ ██ The following exemplary evidence demonstrates that each Cast-enabled control device installed with the YouTube, YouTube Music, YouTube TV, or YouTube Kids app is programmed to perform this functionality: • ███

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY
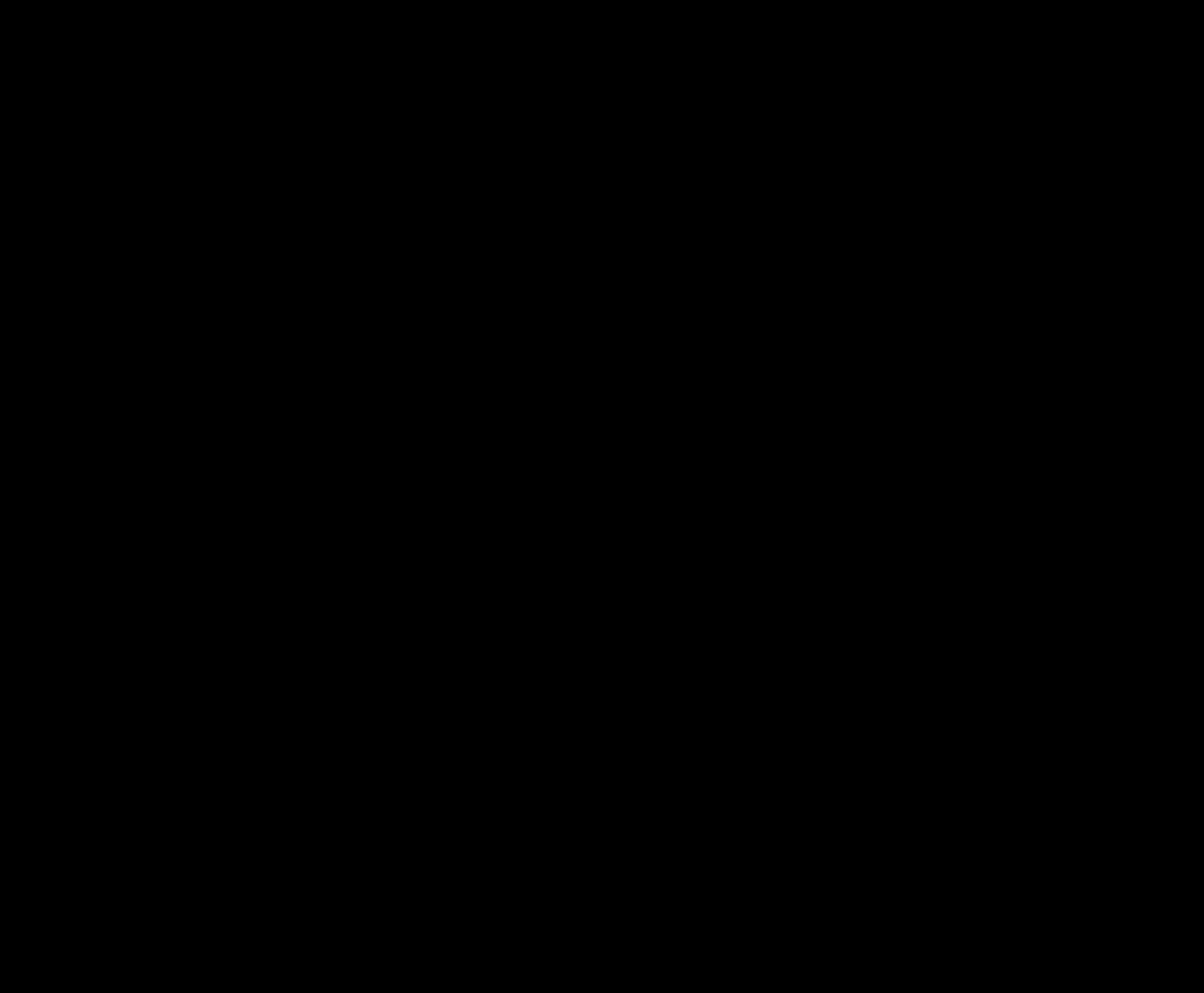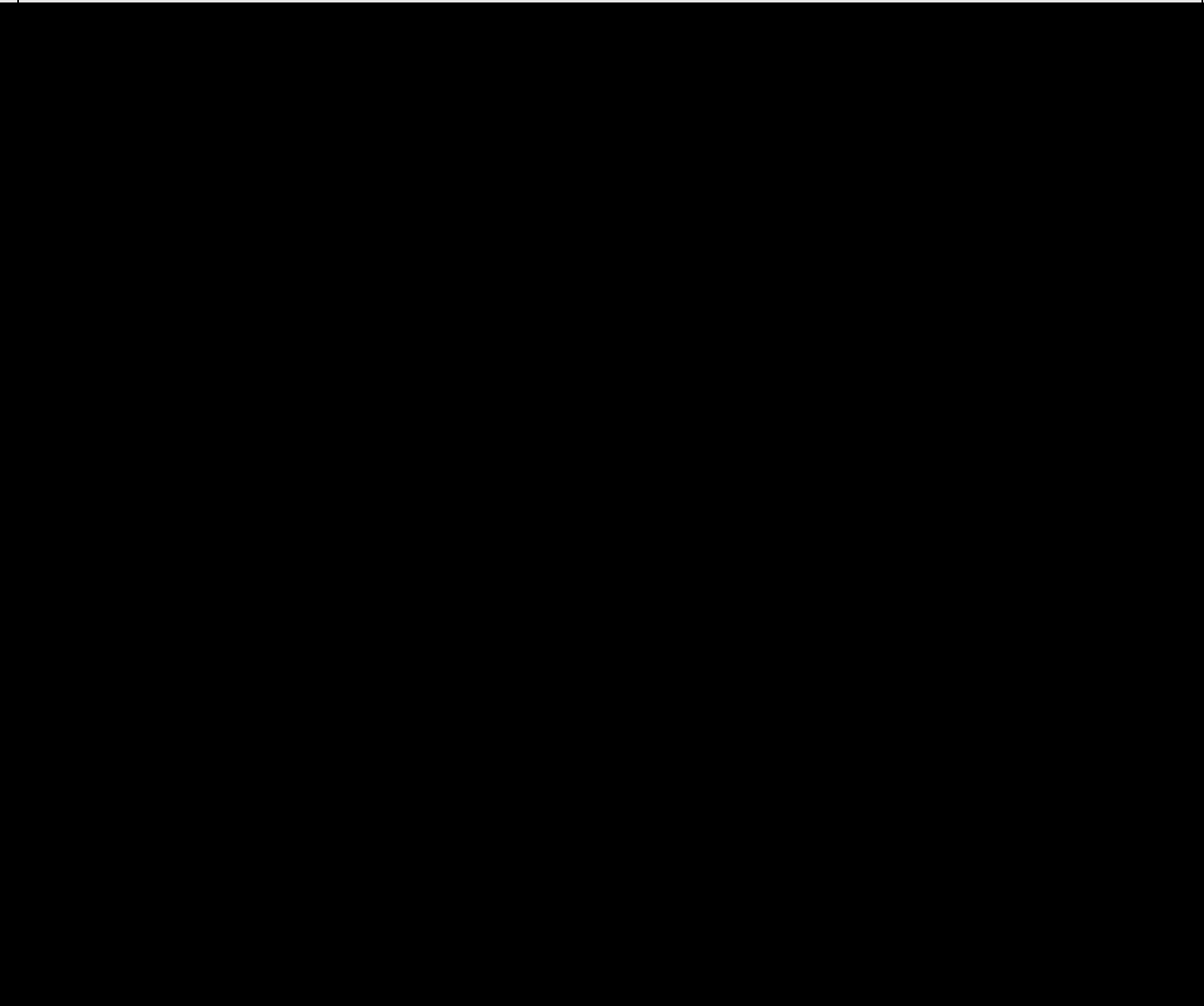
Claim 13	Accused Instrumentalities
	██ Representative excerpts of Google's YouTube app source code[17] related to the aforementioned functionality include:

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[17] ████████████████████████████████████

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 13	Accused Instrumentalities

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 13	Accused Instrumentalities

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 13	Accused Instrumentalities

[18]

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Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 13	Accused Instrumentalities

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 13	Accused Instrumentalities

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 13	Accused Instrumentalities

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Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 13	

[20]

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 13	Accused Instrumentalities

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 13	Accused Instrumentalities

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
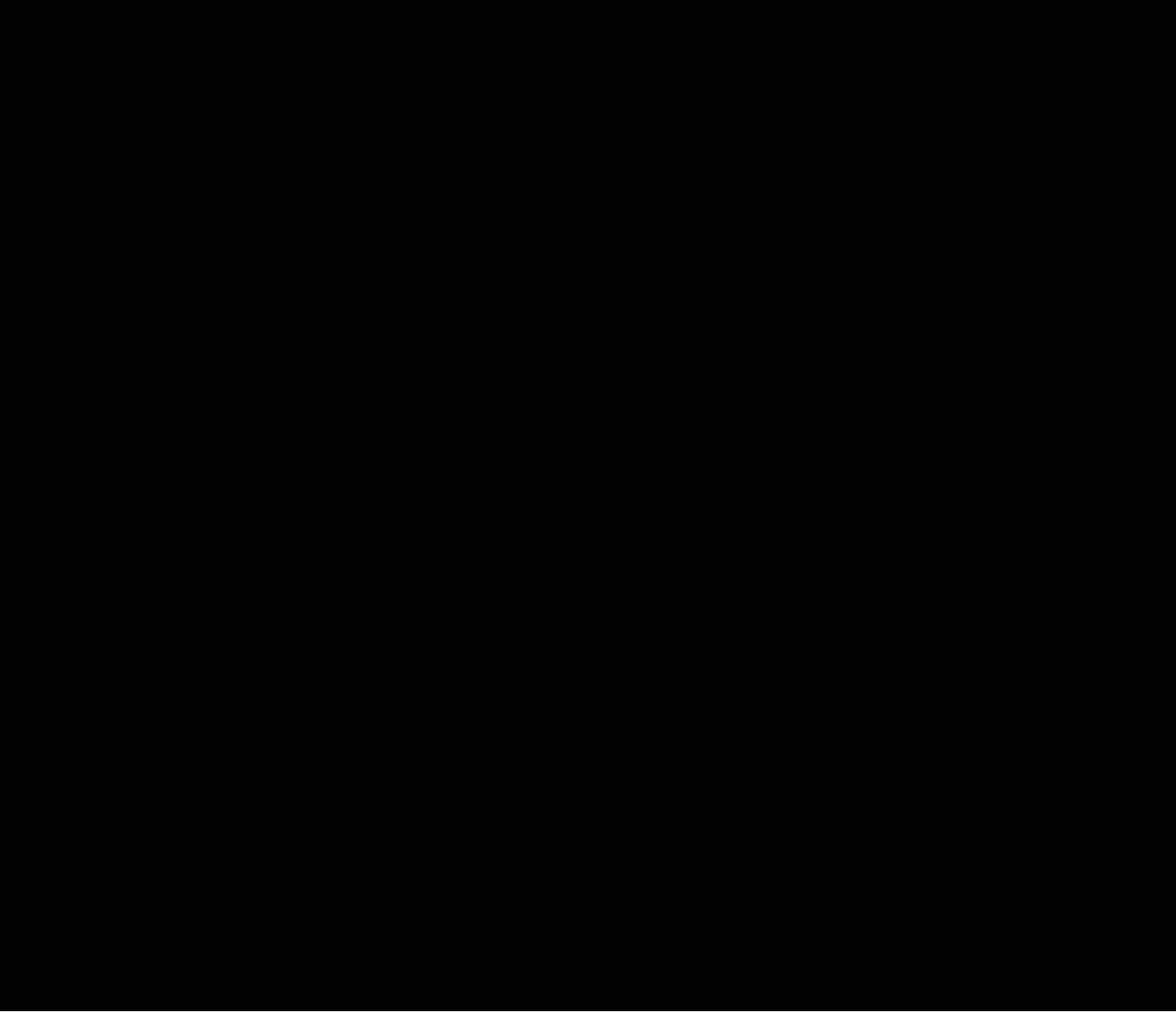**HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY**

Claim 13	

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 13	Accused Instrumentalities

	███
	
	Sonos further incorporates by reference Google's response to Sonos's Fact Discovery Interrogatory Nos. 14-15, including any of Google's documents or source code cited therein. *See* Google LLC's First Objections and Responses to Plaintiff Sonos, Inc.'s First Set of Fact Discovery Interrogatories.
	
	Google Play Music app
	
	Each Cast-enabled computing device installed with the Google Play Music app is programmed such that, after detecting a set of inputs to transfer the Cast-enabled computing device's playback of multimedia content to at least one particular Cast-enabled media player, the Cast-enabled computing device functions to:
	
	   • ███
	   ■ ███

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

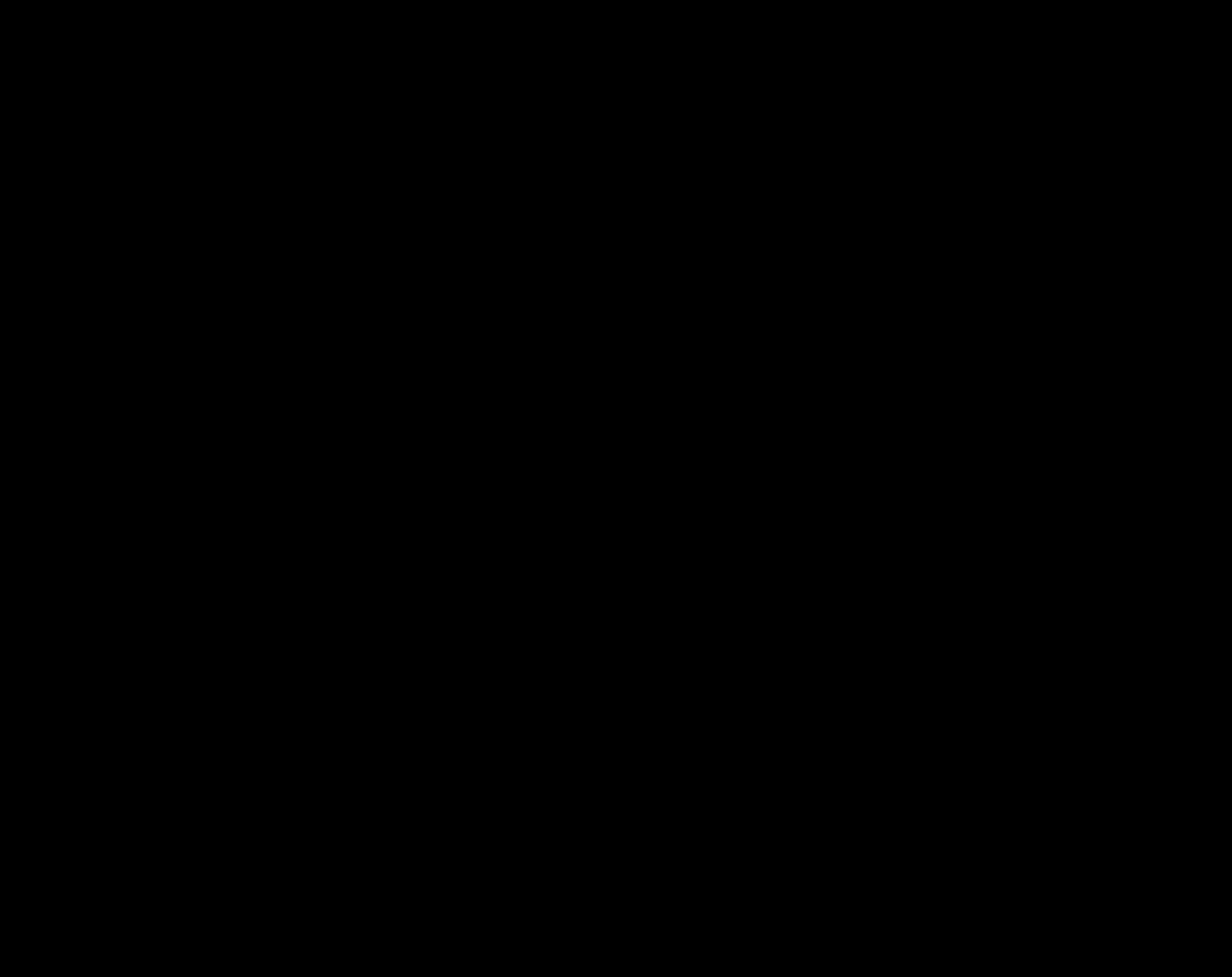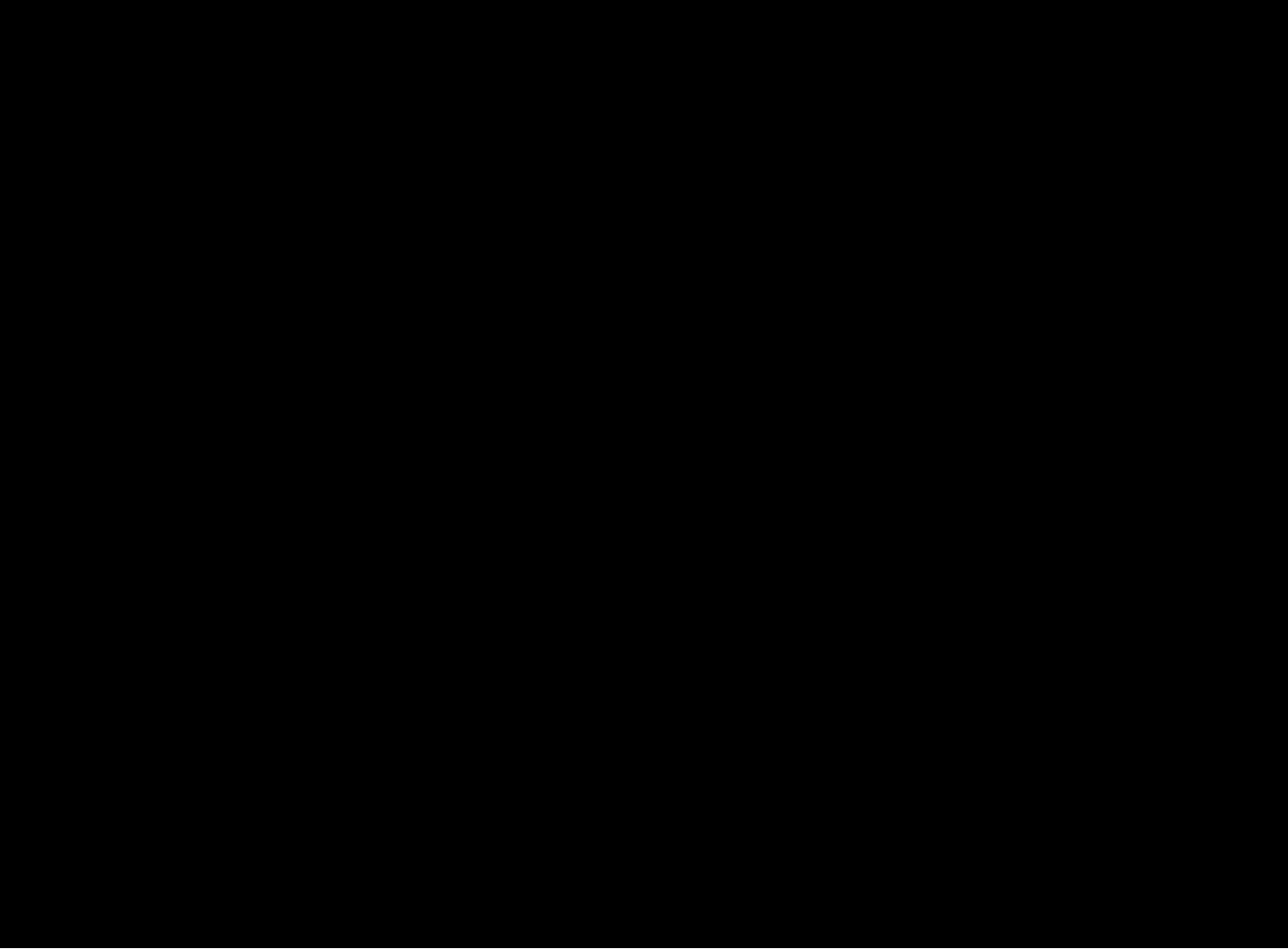| Claim 13	Accused Instrumentalities
	The aforementioned functionality collectively satisfies claim limitations 13.5-13.6.

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 13	Accused Instrumentalities
	███ For the first time on January 10, 2022, Google took the position that the term "resource locator" should be construed as an "address of a resource on the Internet." While Sonos disagrees that this is the proper construction for "resource locator," as that term is used in the context of the '615 Patent, even if the Court were to adopt Google's proposed construction, each Cast-enabled computing device installed with the Google Play Music app would still satisfy claim limitation 13.6(a). ███ Also for the first time on January 10, 2022, Google took the position that the term "local playback queue on the particular playback device" should be construed as "a data structure within the particular playback device that maintains an ordered list of two or more multimedia items for playback in the listed order." While Sonos disagrees that this is the proper construction for "local playback queue on the particular playback device," as that term is used in the context of the '615 Patent, even if the Court were to adopt Google's proposed construction, each Cast-enabled computing device installed with the Google Play Music app would still satisfy claim limitation 13.6(a). ███ The following exemplary evidence demonstrates that each Cast-enabled control device installed with the Google Play Music app is programmed with this functionality: • ██

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[21] To the extent that Google intends for its construction (e.g., by its use of the phrase "multimedia items") to require the "local playback queue" to maintain multimedia content in its data form (which Sonos disagrees with), ██
██

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 13	Accused Instrumentalities

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 13	Accused Instrumentalities

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 13	Accused Instrumentalities

[23]

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 13	Accused Instrumentalities

[24]

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

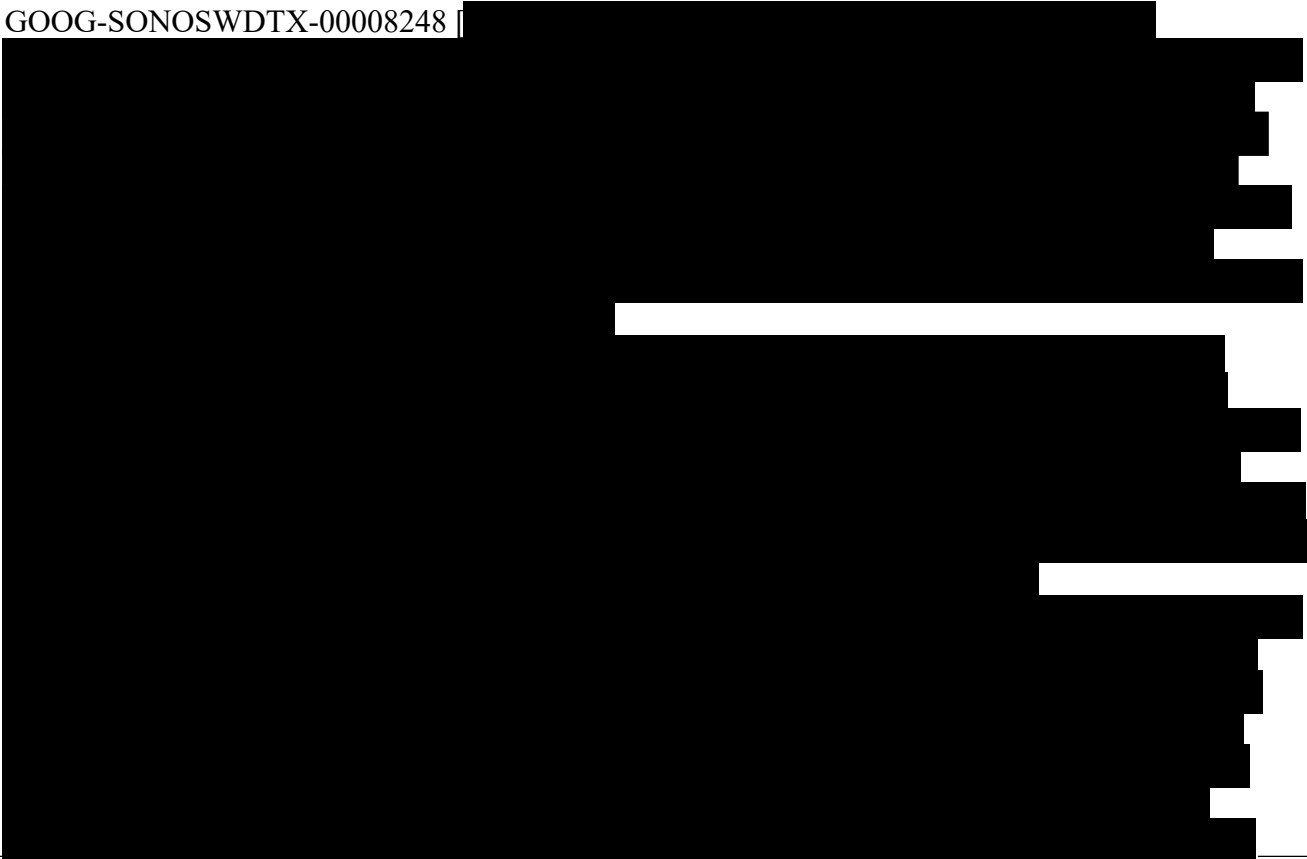| Claim 13	Accused Instrumentalities
	Sonos further incorporates by reference Google's response to Sonos's Fact Discovery Interrogatory Nos. 14-15, including any of Google's documents or source code cited therein. *See* Google LLC's First Objections and Responses to Plaintiff Sonos, Inc.'s First Set of Fact Discovery Interrogatories. ***Spotify app*** Each Cast-enabled control device installed with the Spotify app (which is Cast-enabled and utilizes the Cast SDK) is programmed such that, after detecting a set of inputs to transfer the Cast-enabled computing device's playback of multimedia content to at least one particular Cast-enabled media player, the Cast-enabled computing device functions to: (i) cause the particular Cast-enabled media player to launch the Spotify app and "connect" to the Cast-enabled computing device; (ii) cause the particular Cast-enabled media player to takeover playback of a remote queue (████ ██████████ ") from the Cast-enabled computing device (e.g., ████████████ "), which in turn causes: (a) the particular Cast-enabled media player to communicate with one or more cloud servers (████████████████████████) managing the remote queue previously being played by the Cast-enabled computing device; (b) the one or more cloud servers to add one or more media-item identifiers (e.g., ██████████ from the remote queue to the particular Cast-enabled media player's local playback queue; (iii) detect an indication that the particular Cast-enabled media player has taken over playback responsibility for the remote queue; and (iv) transition its operating state from a local playback mode to a remote playback mode (e.████████ ██████████████████████) in which the Cast-enabled computing device is configured to control the particular Cast-enabled media player's playback of the multimedia content rather than engaging in playback of the multimedia content itself. The aforementioned functionality collectively satisfies claim limitations 13.5-13.6. The following exemplary evidence demonstrates that each Cast-enabled control device installed with the Spotify app is programmed with this functionality:

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 13	Accused Instrumentalities
	      • https://developers.google.com/cast/docs/web_receiver/queueing?hl=en ("Queueing allows partner applications to better integrate with Cast by providing the following features: Support of Google's and partner's cloud queue implementation so externally stored and created queue can be directly loaded into Cast devices."); • https://developers.google.com/cast/docs/reference/web_sender/chrome.cast.media.MediaInfo; • https://developers.google.com/cast/docs/reference/web_sender/chrome.cast.media.LoadRequest. Sonos further incorporates by reference Google's response to Sonos's Fact Discovery Interrogatory Nos. 14-15, including any of Google's documents or source code cited therein. *See* Google LLC's First Objections and Responses to Plaintiff Sonos, Inc.'s First Set of Fact Discovery Interrogatories. ***Cast-Enabled Displays*** Each Cast-enabled display is programmed such that, after detecting a set of inputs to transfer the Cast-enabled display's playback of multimedia content to at least one particular Cast-enabled media player, the Cast-enabled display functions to: •

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

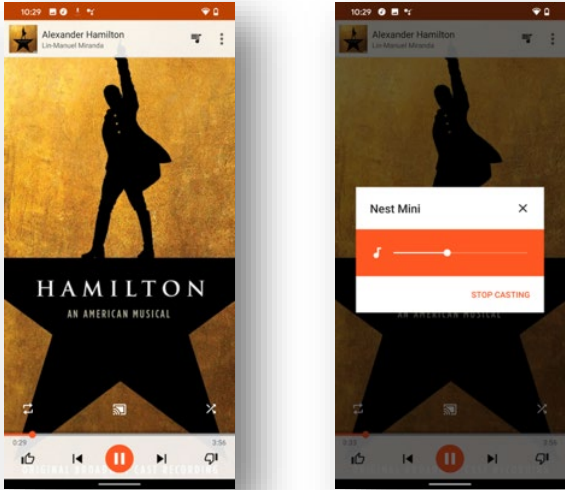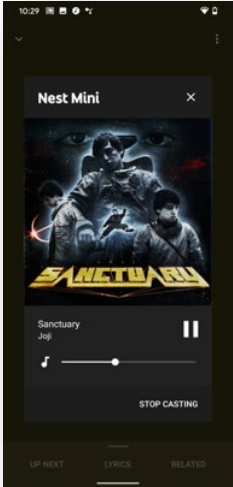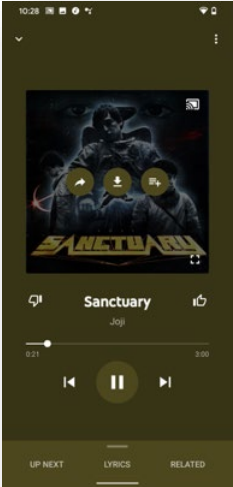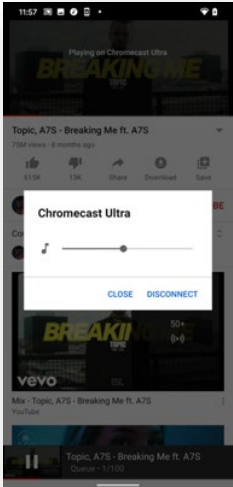| Claim 13	Accused Instrumentalities

	o (b) the cloud server to add one or more media-item identifiers from the remote queue to the particular Cast-enabled media player's local playback queue;
	• (iii) detect an indication that the particular Cast-enabled media player has taken over playback responsibility for the remote queue; and
	• (iv) transition its operating state from a local playback mode to a remote playback mode in which the Cast-enabled computing device is configured to control the particular Cast-enabled media player's playback of the multimedia content rather than engaging in playback of the multimedia content itself.
	
	The aforementioned functionality collectively satisfies claim limitations 13.5-13.6.
	
	In this regard, because each Cast-enabled display is operable to playback media from any one of the YouTube, YouTube Music, or Google Play Music apps and transfer that playback to one or more other Cast-enabled media players, Sonos contends that each Cast-enabled display satisfies these limitations even under Google's proposed constructions for the terms "resource locator" and "local playback queue on the particular playback device" for at least the respective reasons set forth above for (a) the YouTube and YouTube Music apps and (b) the Google Play Music app.
	
	The following exemplary evidence demonstrates that each Cast-enabled display is programmed with this functionality:
	• https://developers.google.com/cast/docs/web_receiver/core_features ("Stream transfer[.] Preserving session state is the basis of stream transfer, a CAF feature where users can move existing audio and video streams across devices using … smart displays. Media stops playing on one device (the source) and continues on another (the destination)…. The event flow for stream transfer is:
	    1. On the source device:
	        a. Media stops playing.
	        b. The Web Receiver application receives a command to save the current media state.
	        c. The Web Receiver application is shut down.
	    2. On the destination device:
	        a. The Web Receiver application is loaded.
	        b. The Web Receiver application receives a command to restore the saved media state.
	        c. Media resumes playing.
	Elements of media state include:

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 13	Accused Instrumentalities
	- o Specific position or timestamp of the song, video, or media item. - o Its place in a broader queue (such as a playlist or artist radio). - o The authenticated user. - o Playback state (for example, playing or paused).") *Id.* ("Preserving session state[.] The Web Receiver SDK provides a default implementation for Web Receiver apps to preserve session states by taking a snapshot of current media status, converting the status into a load request, and resuming the session with the load request."); - https://developers.google.com/cast/docs/reference/web_receiver/cast.framework.messages.LoadRequestData [Class: LoadRequestData]; - GOOG-SONOSWDTX-00008248 [▮▮▮▮▮▮▮▮▮▮▮▮▮]

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 13	Accused Instrumentalities
	Representative excerpts of Google's Cast-enabled display source code[25] related to the aforementioned functionality include:

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

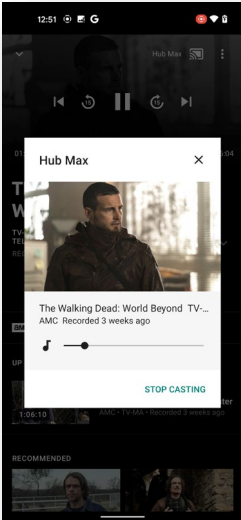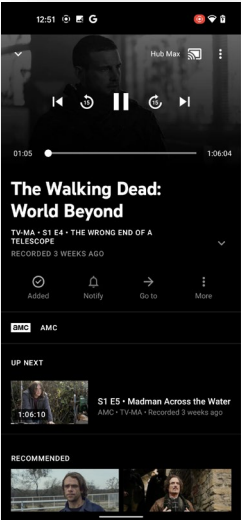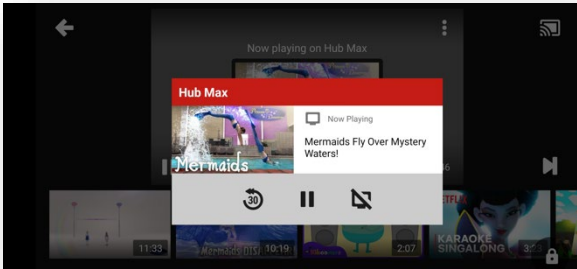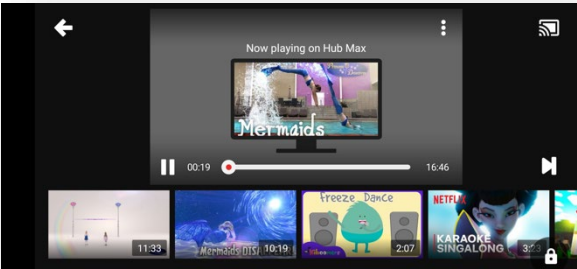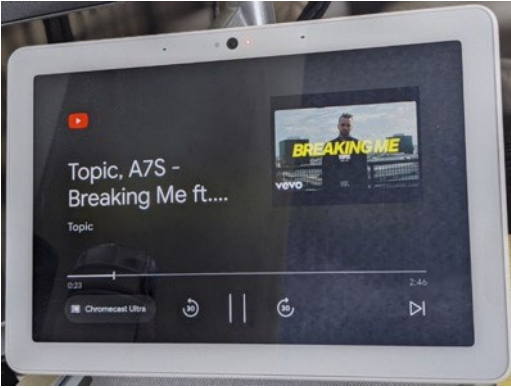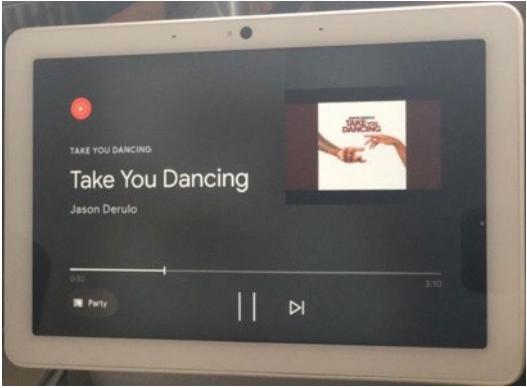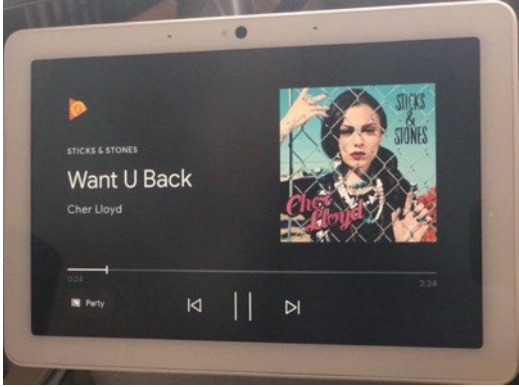| Claim 13	Accused Instrumentalities
	• ███████████████████████████████████████ ████████
	Sonos further incorporates by reference Google's response to Sonos's Fact Discovery Interrogatory Nos. 14-15, including any of Google's documents or source code cited therein. *See* Google LLC's First Objections and Responses to Plaintiff Sonos, Inc.'s First Set of Fact Discovery Interrogatories.
[13.7] causing the particular playback device to play back the multimedia content, wherein the particular playback device playing back the multimedia content comprises the particular playback device retrieving the multimedia content from one or more second cloud servers of a streaming content service and playing back the retrieved multimedia content.	Each Cast-enabled control device and each Cast-enabled app download server comprises a tangible, non-transitory computer-readable storage medium including executable instructions that, when executed by a Cast-enabled control device's processor, cause the Cast-enabled control device to play back the multimedia content, where the particular Cast-enabled media player playing back the multimedia content comprises the particular Cast-enabled media player retrieving the multimedia content from one or more second cloud servers of a streaming content service and playing back the retrieved multimedia content. For instance, each Cast-enabled computing device is programmed such that, after causing the Cast-enabled computing device's playback of multimedia content from a streaming content service (e.g., YouTube, YouTube Music, YouTube TV, YouTube Kids, Google Play Music, a third-party service such as Spotify, etc.) to be transferred to at least one particular Cast-enabled media player (which is the claimed "particular playback device"), the Cast-enabled computing device causes the at least one particular Cast-enabled media player to play back the multimedia content from the streaming content service, which involves the particular Cast-enabled media player retrieving the multimedia content from a second cloud server of the streaming content service that is remote from the particular Cast-enabled media player and accessible over the Internet (e.g., a second cloud server that is operated by either Google or a third-party service provider) and then playing back the retrieved multimedia content. *See, e.g.,* https://support.google.com/googlenest/answer/7181830 [Play media from Chromecast-enabled apps to your speaker or display]; https://support.google.com/chromecast/answer/6279384?hl=en [Cast audio from Chromecast-enabled apps to speakers]; https://support.google.com/chromecast/answer/2995235?hl=en-AU [Cast from the YouTube app and YouTube.com]; https://support.google.com/youtubetv/answer/7353493?co=GENIE.Platform%3DAndroid&hl=en [Cast YouTube TV using Chromecast]; https://support.google.com/youtubekids/answer/6289408?hl=en&co=GENIE.Platform%3DAndroid [Watch YouTube Kids videos on your TV]; http://web.archive.org/web/20200927211448/https://support.google.com/chromecast/answer/6178107 [Listen

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 13	Accused Instrumentalities
	to music with Google Play Music and Chromecast]; https://support.google.com/chromecast/answer/3265953?hl=en [Chromecast-enabled site vs. casting a tab]; https://developers.google.com/cast/docs/ios_sender/queueing ("When you create a media queue item, if you are using the Media Player Library with adaptive content, you can set the preload time so that the player can begin buffering the media queue item before the item ahead of it in the queue finishes playing. Setting the item's autoplay attribute to true allows the Web Receiver to play it automatically."); https://developers.google.com/cast/docs/android_sender/queueing (same). Cast-enabled computing devices installed with various of Google's own Cast-enabled apps are programmed to perform this functionality, including but not limited to the YouTube, YouTube Music, YouTube TV, YouTube Kids, and Google Play Music apps, as illustrated by the following screenshots:

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 13	Accused Instrumentalities

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 13	Accused Instrumentalities

Likewise, Cast-enabled computing devices installed with various third-party Cast-enabled apps are also programmed to perform this functionality, including but not limited to the Spotify app, as illustrated by the following screenshots: |

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 13	Accused Instrumentalities
	  Various other Cast-enabled apps available for installation on Cast-enabled computing devices provide similar functionality. *See, e.g.,* https://support.google.com/chromecast/answer/6279384?hl=en [Cast audio from Chromecast-enabled apps to speakers]; https://www.google.com/chromecast/built-in/apps/. Each Cast-enabled display is also programmed such that, after causing the Cast-enabled display's playback of multimedia content from a streaming content service (e.g., YouTube, YouTube Music, and Google Play Music, a third-party service such as Spotify, etc.) to be transferred to at least one particular Cast-enabled media player (which is the claimed "particular playback device"), the Cast-enabled display causes the at least one particular Cast-enabled media player to play back the multimedia content from the streaming content service, which involves the particular Cast-enabled media player retrieving the multimedia content from a second cloud server of the streaming content service that is remote from the particular Cast-enabled media player and accessible over the Internet (e.g., a second cloud server that is operated by either Google or a third-party service provider) and then playing back the retrieved multimedia content. *See, e.g.,* https://support.google.com/googlenest/answer/9563059?hl=en-IN [Move media from one cast device to another].

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 13	Accused Instrumentalities
	Cast-enabled displays installed with various of Google's own Cast-enabled apps are programmed to perform this functionality, including but not limited to the YouTube, YouTube Music, and Google Play Music, as illustrated by the following photos: Additionally, Cast-enabled displays installed with various third-party Cast-enabled apps are also programmed to perform this functionality, including but not limited to the Spotify app, as illustrated by the following photo:

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Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

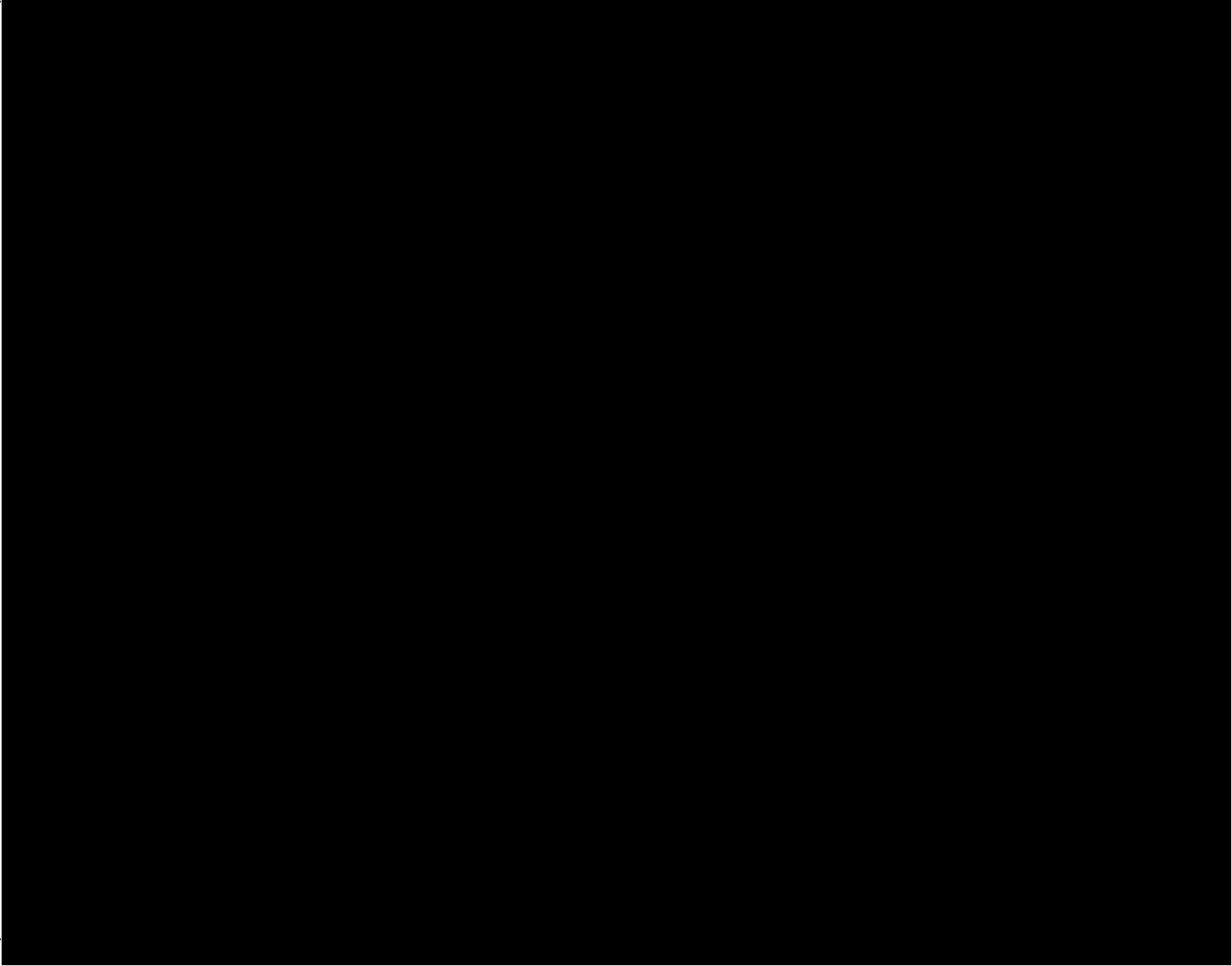| Claim 13	Accused Instrumentalities
	  Various other Cast-enabled apps available for installation on Cast-enabled displays provide similar functionality. Further details regarding how a Cast-enabled control device carries out this functionality, along with representative examples of evidence demonstrating this functionality, are summarized below. ***YouTube, YouTube Music, YouTube TV, & YouTube Kids apps*** As explained above, each Cast-enabled computing device installed with any one of the YouTube, YouTube Music, YouTube TV, or YouTube Kids app is programmed such that, after detecting a set of inputs to transfer the Cast-enabled computing device's playback of multimedia content to at least one particular Cast-enabled media player, the Cast-enabled computing device performs a variety of functions to transfer playback from the Cast-enabled computing device to the particular Cast-enabled media player. ████████████████ ████████████████████████████████████ ████████████████████████████████████ ████████████████████████████████████ ████████████████████████████████████ The aforementioned functionality satisfies claim limitation 13.7.

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 13	Accused Instrumentalities
	The following exemplary evidence, in addition to the evidence cited above for limitations 13.5-13.6, demonstrates that each Cast-enabled control device installed with any one of the YouTube, YouTube Music, YouTube TV, or YouTube Kids app is programmed with this functionality:

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

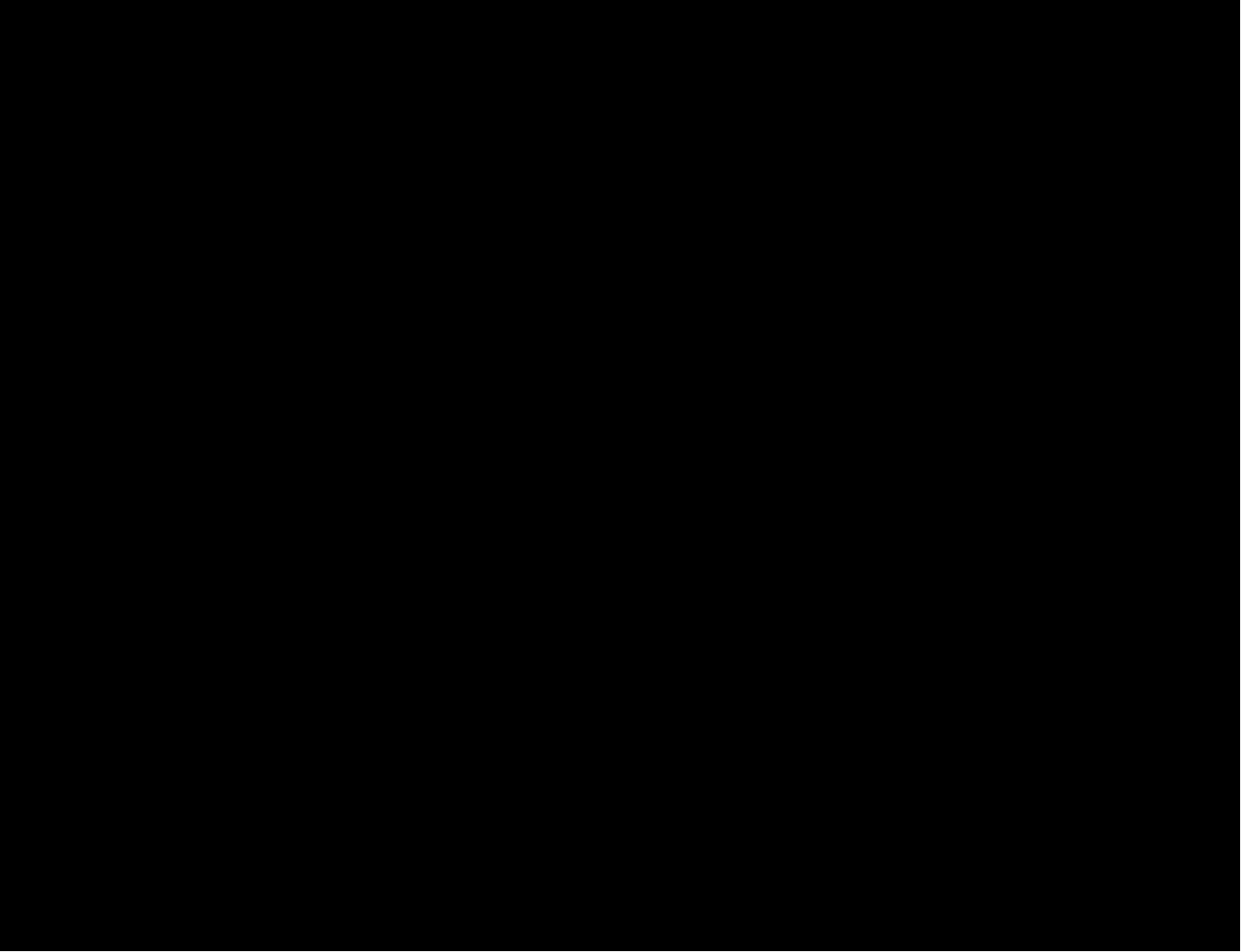| Claim 13	Accused Instrumentalities

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615

HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 13	Accused Instrumentalities

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 13	

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Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY
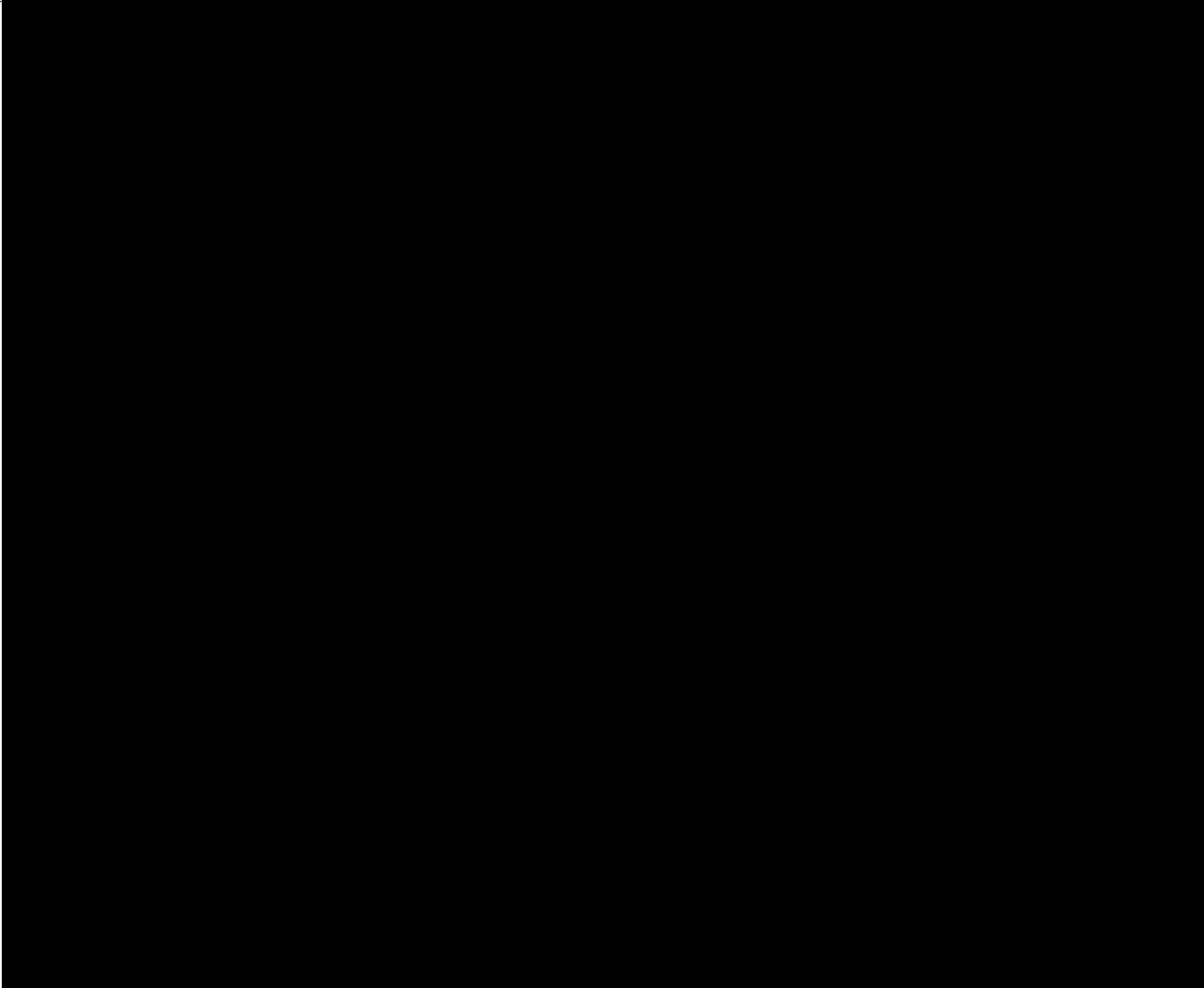
Claim 13	Accused Instrumentalities
	▪ ██████████████████████████████ ██████████████████████████████ ██████████████████████████████ ██████████████████████████████ ██████████████████████████████ Sonos further incorporates by reference Google's response to Sonos's Fact Discovery Interrogatory Nos. 14-15, including any of Google's documents or source code cited therein. *See* Google LLC's First Objections and Responses to Plaintiff Sonos, Inc.'s First Set of Fact Discovery Interrogatories. ***Google Play Music app*** As explained above, each Cast-enabled computing device installed with the Google Play Music app is programmed such that, after detecting a set of inputs to transfer the Cast-enabled computing device's playback of multimedia content to at least one particular Cast-enabled media player, the Cast-enabled computing device performs a variety of functions to transfer playback from the Cast-enabled computing device to the particular Cast-enabled media player. One such function involves the transmission of a "load" message, and that "load" message includes an additional parameter (e.g., ████████████████) that causes the particular Cast-enabled media player to playback multimedia content from the Google Play Music service, which involves the particular Cast-enabled media player retrieving the multimedia content (████████████ ████████) from a cloud media server (██████████████████████████████████) and then playing back the retrieved multimedia content. The aforementioned functionality satisfies claim limitation 13.7. The following exemplary evidence, in addition to the evidence cited above for limitations 13.5-13.6, demonstrates that each Cast-enabled control device installed with the Google Play Music app is programmed with this functionality: • GOOG-SONOSWDTX-00043467 [████████████████████████] at 67, 69:

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 13	Accused Instrumentalities

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 13	Accused Instrumentalities
	Representative excerpts of Google's source code related to the aforementioned functionality include the representative source code identified above for limitations 13.5-13.6. In addition, representative excerpts of Google's Cast-enabled media player source code[29] related to the aforementioned functionality include: ██ ████████████████████████████████████ Sonos further incorporates by reference Google's response to Sonos's Fact Discovery Interrogatory Nos. 14-15, including any of Google's documents or source code cited therein. *See* Google LLC's First Objections and Responses to Plaintiff Sonos, Inc.'s First Set of Fact Discovery Interrogatories. ***Spotify app*** As explained above, each Cast-enabled computing device installed with the Spotify app (which is Cast-enabled and utilizes the Cast SDK) is programmed such that, after detecting a set of inputs to transfer the Cast-enabled computing device's playback of multimedia content to at least one particular Cast-enabled media player, the Cast-enabled computing device functions to perform a variety of operations to transfer playback from the Cast-enabled computing device to the particular Cast-enabled media player. One such function involves the transmission of a message (████████████████ that includes an additional parameter that causes the particular Cast-enabled media player to playback multimedia content from the Spotify service, which involves the particular Cast-enabled media player retrieving the multimedia content from a media server (e.g., ████████████ and then playing back the retrieved multimedia content. The aforementioned functionality satisfies claim limitation 13.7.

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[29] ████████████████████████████

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Claim 13	Accused Instrumentalities
	Sonos further incorporates by reference Google's response to Sonos's Fact Discovery Interrogatory Nos. 14-15, including any of Google's documents or source code cited therein. *See* Google LLC's First Objections and Responses to Plaintiff Sonos, Inc.'s First Set of Fact Discovery Interrogatories. ***Cast-Enabled Displays*** As explained above, each Cast-enabled display is programmed such that, after detecting a set of inputs to transfer the Cast-enabled display's playback of multimedia content to at least one particular Cast-enabled media player, the Cast-enabled display performs a variety of functions to transfer playback from the Cast-enabled display to the particular Cast-enabled media player. One such function involves providing the Cast-enabled display's playback state information to the particular Cast-enabled media player, and that playback state information includes a parameter that causes the particular Cast-enabled media player to playback multimedia content from the same streaming content service that the Cast-enabled display was playing back from when it detected the set of inputs, which involves the particular Cast-enabled media player retrieving the multimedia content from a Google cloud server (███████████████████ or third-party media server and then playing back the retrieved multimedia content. The aforementioned functionality satisfies claim limitation 13.7. The following exemplary evidence, in addition to the evidence cited above for limitations 13.5-13.6, demonstrates that each Cast-enabled display is programmed with this functionality: • https://developers.google.com/cast/docs/reference/web_sender/chrome.cast.media.MediaInfo [Class: MediaInfo]; • ███

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

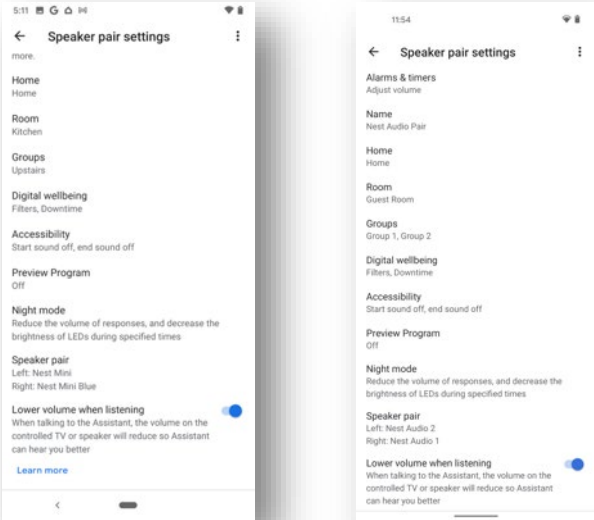| Claim 13	Accused Instrumentalities
	• ███████████████████████████████████████ at 67, 69. Sonos further incorporates by reference Google's response to Sonos's Fact Discovery Interrogatory Nos. 14-15, including any of Google's documents or source code cited therein. *See* Google LLC's First Objections and Responses to Plaintiff Sonos, Inc.'s First Set of Fact Discovery Interrogatories.

Claim 14	Accused Instrumentalities
[14.0] The tangible, non-transitory computer readable medium of claim 13, **[14.1]** wherein detecting the set of inputs to transfer playback from the control device to the particular playback device comprises detecting a set of inputs to transfer playback from the control device to a particular zone of a media playback system that includes the	As described above, each Cast-enabled control device and each Cast-enabled app download server comprises a "tangible, non-transitory computer-readable storage medium," as recited in claim 13. Moreover, in accordance with the executable instructions, each Cast-enabled computing device is programmed such that detecting the set of inputs to transfer playback from the Cast-enabled computing device to the particular Cast-enabled media player comprises detecting a set of inputs to transfer playback from the Cast-enabled computing device to a particular zone of a Cast-enabled media playback system that includes the particular Cast-enabled media player as a first channel of a stereo pair and an additional Cast-enabled media player as a second channel of the stereo pair. For instance, each Cast-enabled computing device is programmed such that detecting the set of inputs to transfer playback from the Cast-enabled computing device to the particular Cast-enabled media player comprises detecting a set of inputs to transfer playback from the Cast-enabled computing device to a "speaker pair" (which is a configuration for "stereo sound" that Google also refers to as a "stereo sound pairing") in which one particular Cast-enabled media player serves as one channel of the "speaker pair" (e.g., the left channel) and an additional Cast-enabled media player serves as the other channel of the "speaker pair" (e.g., the right channel), where this speaker pair defines one particular "zone" of the Cast-enabled media playback system under the plain and ordinary meaning of that term.[30] *See, e.g.,* https://support.google.com/googlenest/answer/7559493?co=GENIE.Platform%3DAndroid&hl=en [Pair 2 speakers for stereo sound] ("[Y]our speaker pair will appear as a single device.");

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[30] Cast-enabled media players capable of "stereo sound pairing" include the Google Home, Google Nest Mini (2nd gen), Google Home Mini (1st gen), Google Home Max, and Google Nest Audio media players, as well as certain third-party media players with built-in Cast functionality (e.g., Bang & Olufsen's audio players). *See e.g.,* https://support.google.com/googlenest/answer/7559493?co=GENIE.Platform%3DAndroid&hl=en; https://www.bang-olufsen.com/en/speakers/beoplay-m3 ("Set up the stereo pairing through the Google Home App."); https://www.google.com/chromecast/built-in/audio/.

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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Claim 14	Accused Instrumentalities
particular playback device as a first channel of a stereo pair and an additional playback device as a second channel of the stereo pair,	https://support.google.com/googlenest/answer/7181830 [Play media from Chromecast-enabled apps to your speaker or display] ("Tap the Cast button ⬚. . . . Tap the speaker or display for which you'd like to cast."); https://support.google.com/chromecast/answer/6279384?hl=en [Cast audio from Chromecast-enabled apps to speakers] ("2. In the top right corner, tap the Cast button ⬚. 3. Choose your speaker."); http://web.archive.org/web/20200927211448/https://support.google.com/chromecast/answer/6178107 [Listen to music with Google Play Music and Chromecast] ("Tap the Cast button ⬚. . . . Select your Chromecast device from the device list."); https://support.google.com/chromecast/answer/3265953?hl=en [Chromecast-enabled site vs. casting a tab]; https://www.youtube.com/watch?v=zK69Ba61dgg [Google Home Mini & Google Nest Mini Stereo Pair: How to Set it Up!] To illustrate, the following screenshots from an example Cast-enabled computing device running the Google Home app show that (1) an example "speaker pair" named "Nest Mini pair" has been created that includes a particular Cast-enabled media player named "Nest Mini" as the "Left" channel of the "speaker pair," and an additional Cast-enabled media player named "Nest Mini Blue" as the right channel of the "speaker pair," and (2) an example "speaker pair" named "Nest Audio Pair" has been created that includes a particular Cast-enabled media player named "Nest Audio 2" as the "Left" channel of the "speaker pair," and an additional Cast-enabled media player named "Nest Audio 1" as the right channel of the "speaker pair":

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Claim 14	Accused Instrumentalities
	  In turn, Cast-enabled computing devices installed with various of Google's own Cast-enabled apps, including but not limited to YouTube Music and Google Play Music, are programmed to detect a set of inputs to transfer playback from the Cast-enabled computing device to one of these created "speaker pairs" (e.g., the "Nest Mini pair") that defines one particular "zone" of the Cast-enabled media playback system, as illustrated by the following screenshots:

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

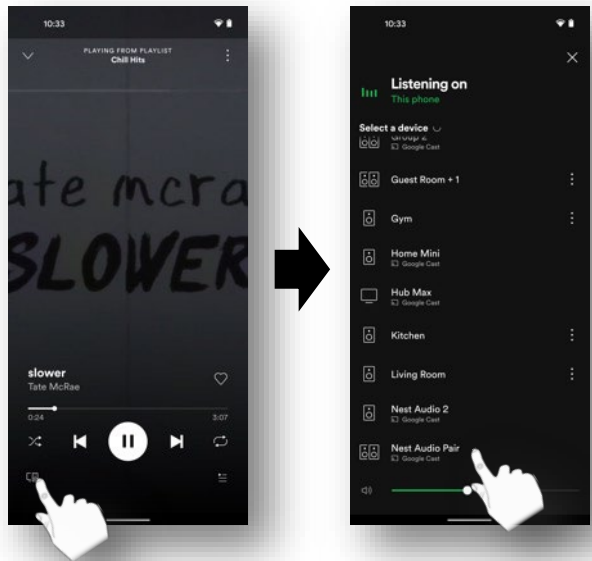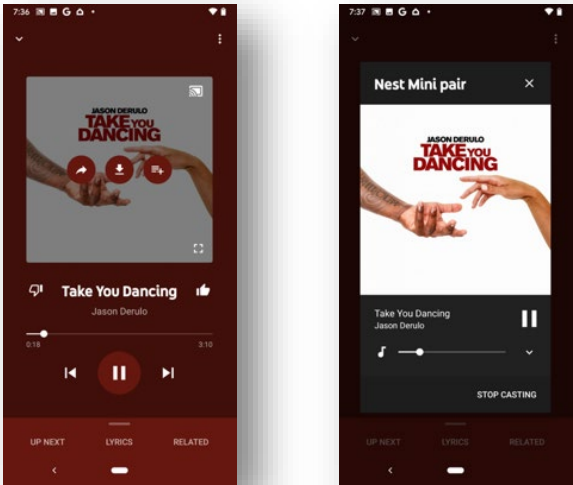| Claim 14	Accused Instrumentalities
	  Likewise, Cast-enabled computing devices installed with various third-party Cast-enabled apps, including but not limited to Spotify, are programmed to detect a set of inputs to transfer playback from the Cast-enabled computing device to one of these created "speaker pairs" (e.g., the "Nest Audio Pair") that defines one particular "zone" of the Cast-enabled media playback system, as illustrated by the following screenshots:

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

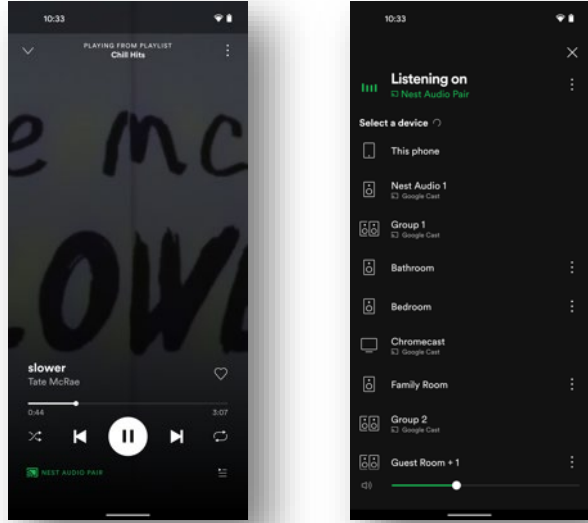| Claim 14	Accused Instrumentalities
	  Various other Cast-enabled apps available for installation on Cast-enabled computing devices provide similar functionality. *See, e.g.*, https://support.google.com/chromecast/answer/6279384?hl=en [Cast audio from Chromecast-enabled apps to speakers]; https://www.google.com/chromecast/built-in/apps/.
[14.2] wherein modifying the one or more transport controls of the control interface to control playback by the particular playback device comprises causing the one or more transport controls of the control	In accordance with the executable instructions, each Cast-enabled computing device is programmed such that modifying the one or more transport controls of the control interface to control playback by the particular Cast-enabled media player comprises causing the one or more transport controls of the control interface to control playback by the particular Cast-enabled media player and the additional Cast-enabled media player that are in the stereo pair. For instance, each Cast-enabled computing device is programmed such that modifying the one or more transport controls (e.g., Play, Pause, Skip, etc.) of the control interface to control playback by the particular Cast-enabled media player comprises causing the one or more transport controls of the control interface to control playback by the particular Cast-enabled media player and the additional Cast-enabled media player that are in a "speaker pair." *See, e.g.,* https://support.google.com/googlenest/answer/7181830 [Play media from Chromecast-enabled apps to your speaker or display] ("You can even use your mobile device or tablet

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

Claim 14	Accused Instrumentalities
interface to control playback by the particular playback device and the additional playback device, and	as a remote and control everything from playback to volume."); https://support.google.com/chromecast/answer/6279384?hl=en [Cast audio from Chromecast-enabled apps to speakers]; http://web.archive.org/web/20200927211448/https://support.google.com/chromecast/answer/6178107 [Listen to music with Google Play Music and Chromecast] ("Using your phone or tablet: [ ] You can use the playback controls on the Google Play Music app . . . Using your computer: [ ] You can use the playback controls on Google Play Music, near the bottom of the screen.").
[14.3] wherein the particular playback device playing back the retrieved multimedia content comprises the particular playback device and the additional playback device playing back the multimedia content as the stereo pair.	In accordance with the executable instructions, each Cast-enabled computing device is programmed with the capability to perform the aforementioned functions where the particular Cast-enabled media player playing back the retrieved multimedia content comprises the particular Cast-enabled media player and the additional Cast-enabled media player playing back the multimedia content as the stereo pair. For instance, each Cast-enabled computing device is programmed with the capability to perform the aforementioned functions where the particular Cast-enabled media player playing back the retrieved multimedia content comprises the particular Cast-enabled media player and the additional Cast-enabled media player playing back the multimedia content in synchrony as part of a "speaker pair." Cast-enabled computing devices installed with various of Google's own Cast-enabled apps are programmed to perform this functionality, including but not limited to the YouTube Music and Google Play Music, as illustrated by the following screenshots:

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

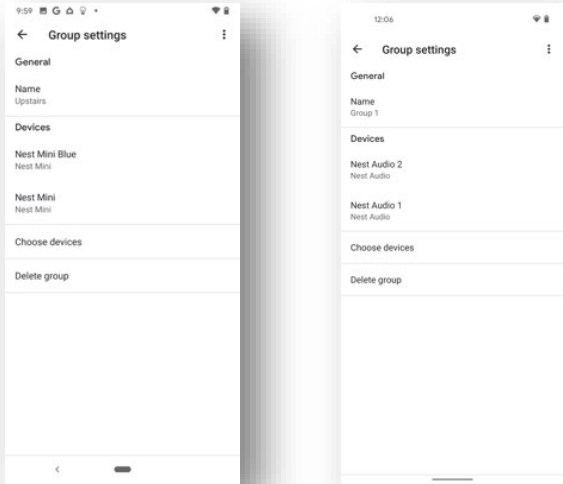| Claim 14	Accused Instrumentalities
	  Likewise, Cast-enabled computing devices installed with various third-party Cast-enabled apps are also programmed to perform this functionality, including but not limited to the Spotify app, as illustrated by the following screenshots:

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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Claim 14	Accused Instrumentalities
	  Various other Cast-enabled apps available for installation on Cast-enabled computing devices provide similar functionality. *See, e.g.,* https://support.google.com/chromecast/answer/6279384?hl=en [Cast audio from Chromecast-enabled apps to speakers]; https://www.google.com/chromecast/built-in/apps/.

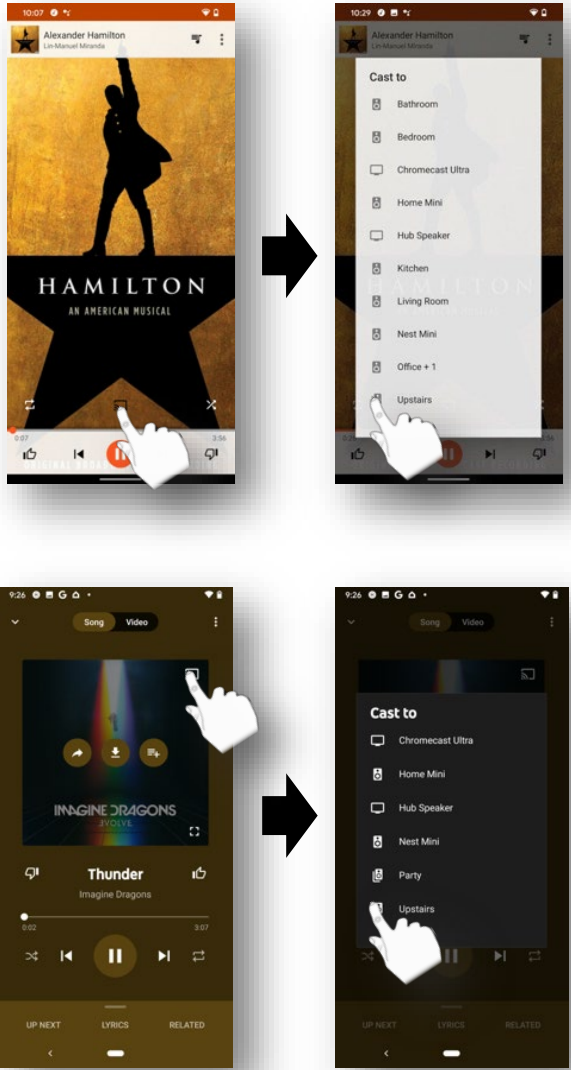| Claim 15	Accused Instrumentalities
[15.0] The tangible, non-transitory computer readable medium of claim 13, **[15.1]** wherein detecting the set of inputs to transfer playback from the control device to the particular	As described above, each Cast-enabled control device and each Cast-enabled download app comprises a "tangible, non-transitory computer-readable storage medium," as recited in claim 13. Moreover, in accordance with the executable instructions, each Cast-enabled control device is programmed such that detecting the set of inputs to transfer playback from the Cast-enabled control device to the particular Cast-enabled media player comprises detecting a set of inputs to transfer playback from the Cast-enabled control device to a particular zone group of a particular Cast-enabled media playback system that includes a first zone and a second zone. For instance, each Cast-enabled computing device is programmed such that detecting the set of inputs to transfer playback from the Cast-enabled computing device to the particular Cast-enabled media player

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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Claim 15	Accused Instrumentalities
playback device comprises detecting a set of inputs to transfer playback from the control device to a particular zone group of a media particular playback system that includes a first zone and a second zone, **[15.2]** wherein the first zone includes the particular playback device and the second zone includes at least one additional playback device,	comprises detecting a set of inputs to transfer playback from the Cast-enabled computing device to a particular "speaker group" that includes at least (i) a first Cast-enabled media player, which defines a first "zone" of the Cast-enabled media playback system under the plain and ordinary meaning of that term, and (ii) a second Cast-enabled media player, which defines a second "zone" of the Cast-enabled media playback system under the plain and ordinary meaning of that term, where the first and second Cast-enabled media players are configured to playback audio in synchrony when the "speaker group" is launched. *See, e.g.,* https://support.google.com/googlenest/answer/7174267?hl=en-GB&co=GENIE.Platform=Android ("Group any combination of Google Nest or Google Home speakers and displays and Chromecast devices together for synchronous music throughout the home."); https://support.google.com/googlenest/answer/7181830 [Play media from Chromecast-enabled apps to your speaker or display]; https://support.google.com/chromecast/answer/6279384?hl=en [Cast audio from Chromecast-enabled apps to speakers]; http://web.archive.org/web/20200927211448/https://support.google.com/chromecast/answer/6178107 [Listen to music with Google Play Music and Chromecast]; https://support.google.com/chromecast/answer/3265953?hl=en [Chromecast-enabled site vs. casting a tab]; https://www.youtube.com/watch?v=6jeRkAqEjuk [Google Home & Chromecast Audio Groups]; https://www.youtube.com/watch?v=L9RpXVM45EY&t=388s [Google Home, Google Mini & Google Home Max Group Speakers Feature! Play Music Multi Room Music]. Such a "speaker group" amounts to the claimed "particular zone group of a media particular playback system that includes a first zone and a second zone, wherein the first zone includes the particular playback device and the second zone includes at least one additional playback device." To illustrate, the following screenshots from an example Cast-enabled computing device running the Google Home app show (1) a first example "speaker group" named "Upstairs" that has been created, which includes a particular Cast-enabled media player named "Nest Mini" that defines a first zone of the Cast-enabled media playback system and another Cast-enabled media player named "Nest Mini Blue" that defines a second zone of the Cast-enabled media playback system, and (2) a second example "speaker group" named "Group 1" that has been created, which includes a particular Cast-enabled media player named "Nest Audio 1" that defines a first zone of the Cast-enabled media playback system and another Cast-enabled media player named "Nest Audio 2" defines a first zone of the Cast-enabled media playback system:

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Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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Claim 15	Accused Instrumentalities
	  In turn, Cast-enabled computing devices installed with various of Google's own Cast-enabled apps, including but not limited to YouTube Music and Google Play Music, are programmed to detect a set of inputs to transfer playback from the Cast-enabled computing device to such a "speaker group," as illustrated by the following screenshots:

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Claim 15	Accused Instrumentalities

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY

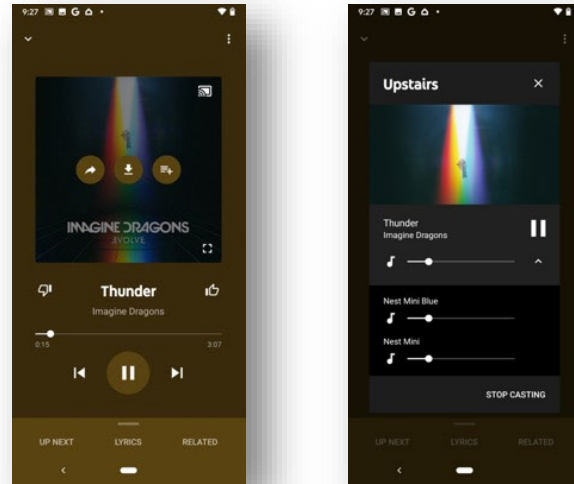| Claim 15	Accused Instrumentalities
	Likewise, Cast-enabled computing devices installed with various third-party Cast-enabled apps, including but not limited to the Spotify app, are programmed to detect a set of inputs to transfer playback from the Cast-enabled computing device to such a "speaker group," as illustrated by the following screenshots: Various other Cast-enabled apps available for installation on Cast-enabled computing devices provide similar functionality. *See, e.g.,* https://support.google.com/chromecast/answer/6279384?hl=en [Cast audio from Chromecast-enabled apps to speakers]; https://www.google.com/chromecast/built-in/apps/. Each Cast-enabled display is also programmed with the capability to perform the aforementioned functions where detecting the set of inputs to transfer playback from the Cast-enabled display to the particular Cast-enabled media player comprises detecting a set of inputs to transfer playback from the Cast-enabled display to a particular "speaker group" that includes at least (i) a first Cast-enabled media player, which defines a first "zone" of the Cast-enabled media playback system under the plain and ordinary meaning of that term, and (ii) a second Cast-enabled media player, which defines a second "zone" of the Cast-enabled media playback system under the plain and ordinary meaning of that term, where the first and second Cast-enabled media players are configured to playback audio in synchrony when the "speaker group" is launched. *See, e.g.,* https://support.google.com/googlenest/answer/9563059?hl=en-IN [Move media from one cast device to

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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Claim 15	Accused Instrumentalities
	another]; claim limitation 13.4 (illustrating examples of this functionality from a Cast-enabled display running Google's own Cast-enabled apps, as well as third-party Cast-enabled apps). *See also, e.g.*, Ex. C [10,469,966 - Infringement Contention Chart] at claim limitations 1.5-1.6, 1.10.
[15.3] wherein modifying the one or more transport controls of the control interface to control playback by the playback device comprises causing the one or more transport controls of the control interface to control playback by the particular playback device and the at least one additional playback device in synchrony, and	In accordance with the executable instructions, each Cast-enabled control device is programmed such that modifying the one or more transport controls of the control interface to control playback by the Cast-enabled media player comprises causing the one or more transport controls of the control interface to control playback by the particular Cast-enabled media player and the at least one additional playback device in synchrony. For instance, each Cast-enabled control device is programmed such that modifying the one or more transport controls (e.g., Play, Pause, Skip, etc.) of the control interface to control playback by the particular Cast-enabled media player comprises causing the one or more transport controls of the control interface to control synchronous playback by the particular Cast-enabled media player and at least one additional Cast-enabled media player that are included in a "speaker group." *See, e.g.,* https://support.google.com/googlenest/answer/7174267?hl=en-GB&co=GENIE.Platform=Android ("Group any combination of Google Nest or Google Home speakers and displays and Chromecast devices together for synchronous music throughout the home."); https://support.google.com/chromecast/answer/6279384?hl=en [Cast audio from Chromecast-enabled apps to speakers]; https://support.google.com/googlenest/answer/7181830 [Play media from Chromecast-enabled apps to your speaker or display]; http://web.archive.org/web/20200927211448/https://support.google.com/chromecast/answer/6178107 [Listen to music with Google Play Music and Chromecast]; https://support.google.com/googlenest/answer/9563059?hl=en-IN [Move media from one cast device to another]; https://support.google.com/chromecast/answer/3265953?hl=en [Chromecast-enabled site vs. casting a tab].
[15.4] wherein the particular playback device playing back the retrieved multimedia content comprises the particular playback	In accordance with the executable instructions, each Cast-enabled control device is programmed with the capability to perform the aforementioned functions where the particular Cast-enabled media player playing back the retrieved multimedia content comprises the particular Cast-enabled media player and the at least one additional Cast-enabled media player playing back the multimedia content in synchrony. For instance, each Cast-enabled control device is programmed with the capability to perform the aforementioned functions where the particular Cast-enabled media player playing back the retrieved

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Claim 15	Accused Instrumentalities
device and the at least one additional playback device playing back the multimedia content in synchrony.	multimedia content comprises the particular Cast-enabled media player and the at least one additional Cast-enabled media player playing back the multimedia content in synchrony as part of the "speaker group." *See, e.g.*, https://support.google.com/googlenest/answer/7174267?hl=en-GB&co=GENIE.Platform=Android ("Group any combination of Google Nest or Google Home speakers and displays and Chromecast devices together for synchronous music throughout the home."); Ex. C [10,469,966 - Infringement Contention Chart] at claim limitation 1.11. Cast-enabled computing devices installed with various of Google's own Cast-enabled apps are programmed to perform this functionality, including but not limited to the YouTube Music and Google Play Music, as illustrated by the following screenshots: Likewise, Cast-enabled computing devices installed with various third-party Cast-enabled apps are also programmed to perform this functionality, including but not limited to the Spotify app, as illustrated by the following screenshots:

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Claim 15	Accused Instrumentalities
	Various other Cast-enabled apps available for installation on Cast-enabled computing devices provide similar functionality. *See, e.g.,* https://support.google.com/chromecast/answer/6279384?hl=en [Cast audio from Chromecast-enabled apps to speakers]; https://www.google.com/chromecast/built-in/apps/.
	See also, e.g., claim limitation 13.7 (illustrating examples of this functionality from a Cast-enabled display running Google's own Cast-enabled apps, as well as third-party Cast-enabled apps).

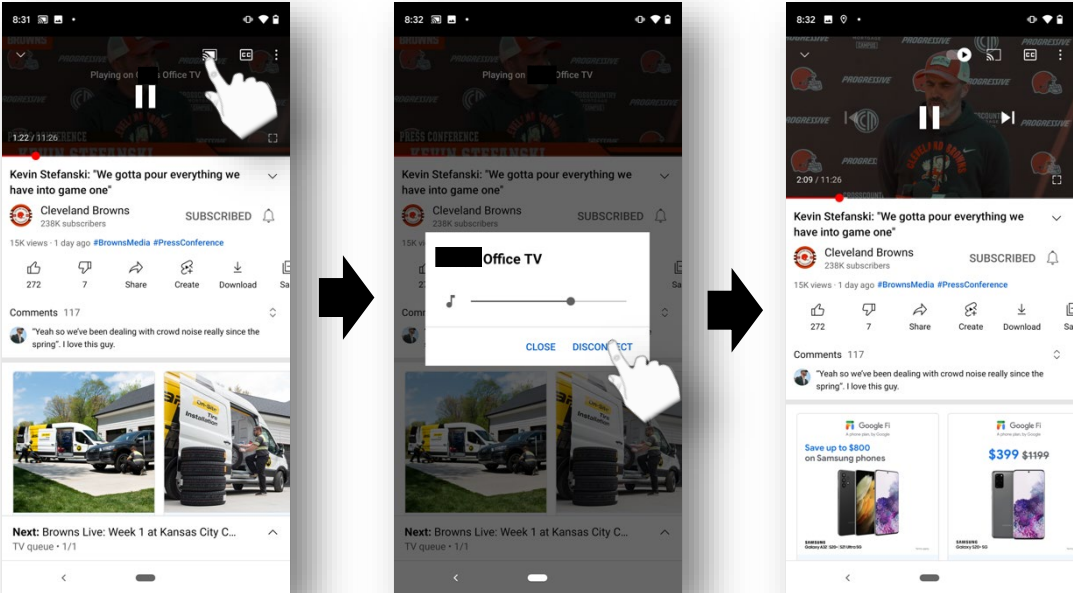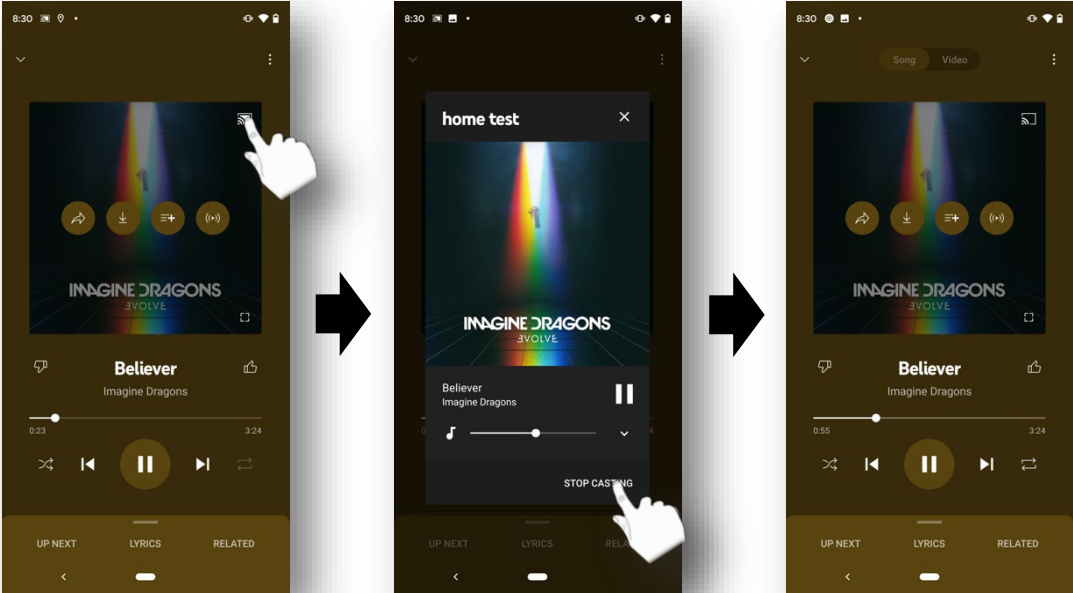| Claim 18	Accused Instrumentalities
[18.0] The tangible, non-transitory computer readable medium of claim 13, **[18.1]** wherein the method further comprises detecting a set of inputs to	As described above, each Cast-enabled control device and each Cast-enabled app download server comprises a "tangible, non-transitory computer-readable storage medium," as recited in claim 13. Moreover, the tangible, non-transitory computer-readable storage medium of each Cast-enabled control device and each Cast-enabled app download server further includes instructions that, when executed by a Cast-enabled control device's processor, cause the Cast-enabled control device to detect a set of inputs to transfer playback from the Cast-enabled media player back to the Cast-enabled control device, where transferring playback from the Cast-enabled media player back to the Cast-enabled control device comprises (i) causing playback at the

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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Claim 18	Accused Instrumentalities
transfer playback from the playback device back to the control device, wherein transferring playback from the playback device back to the control device comprises: **[18.2]** causing playback at the playback device to be stopped; and **[18.3]** modifying the one or more transport controls of the control interface to control playback by the control device.	Cast-enabled media player to be stopped, and (ii) modifying the one or more transport controls of the control interface to control playback by the Cast-enabled control device. For instance, each Cast-enabled control device is programmed with the capability to detect a set of inputs to "stop casting" to the at least one particular Cast-enabled media player, which causes playback to be transferred from the Cast-enabled media player back to the Cast-enabled control device by (i) causing playback at the Cast-enabled media player to be stopped, and (ii) modifying the one or more transport controls of the control interface to control playback by the Cast-enabled control device rather than playback by the Cast-enabled media player. *See, e.g.,* https://support.google.com/googlenest/answer/7181830 [Play media from Chromecast-enabled apps to your speaker or display] ("To stop casting, tap the cast button 📶 at the top of your device. Tap Stop Casting in the box that appears."); https://support.google.com/chromecast/answer/6279384?hl=en [Cast audio from Chromecast-enabled apps to speakers]; https://support.google.com/chromecast/answer/2995235?hl=en-AU [Cast from the YouTube app and YouTube.com] ("To stop casting content, tap the Cast button 📶 › Disconnect."); https://support.google.com/youtubetv/answer/7353493?co=GENIE.Platform%3DAndroid&hl=en [Cast YouTube TV using Chromecast] ("Step 4. Stop casting Tap or click Cast 📶 › Disconnect."); http://web.archive.org/web/20200927211448/https://support.google.com/chromecast/answer/6178107 [Listen to music with Google Play Music and Chromecast] ("Using your phone or tablet: [ ] Tap the Cast button 📶 and select Disconnect. [ ] Using your computer: . . . click the Cast button 📶 and then Stop Casting."); https://support.google.com/googlenest/answer/9563059?hl=en-IN [Move media from one cast device to another]; GOOG-SONOSWDTX-00038533 [███████████████████████████ ████████████████████); https://developer.android.com/guide/topics/media/mediarouteprovider [MediaRouterProvider overview]. Representative examples of evidence demonstrating this functionality are summarized below. *__YouTube, YouTube Music, YouTube TV, & YouTube Kids apps__* Each Cast-enabled control device installed with any one of the YouTube, YouTube Music, YouTube TV, or YouTube Kids app is programmed to detect a set of inputs to "stop casting" to the at least one particular Cast-enabled media player that causes playback to be transferred from the Cast-enabled media player back to the Cast-enabled control device, as demonstrated by the following exemplary evidence:

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Claim 18	Accused Instrumentalities

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Claim 18	Accused Instrumentalities

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Claim 18	Accused Instrumentalities

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Claim 18	Accused Instrumentalities

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Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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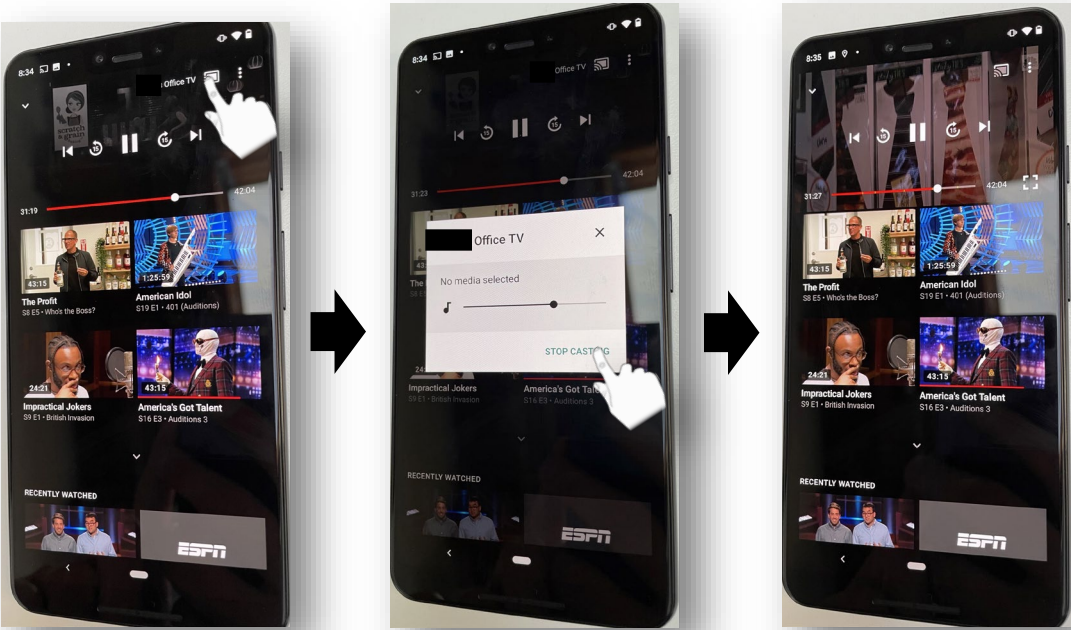| Claim 18	Accused Instrumentalities
	Sonos further incorporates by reference Google's response to Sonos's Fact Discovery Interrogatory Nos. 14-15, including any of Google's documents or source code cited therein. *See* Google LLC's First Objections and Responses to Plaintiff Sonos, Inc.'s First Set of Fact Discovery Interrogatories. ***Google Play Music app***

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Claim 18	Accused Instrumentalities
	Each Cast-enabled control device installed with the Google Play Music app is programmed to detect a set of inputs to "stop casting" to the at least one particular Cast-enabled media player that causes playback to be transferred from the Cast-enabled media player back to the Cast-enabled control device. Representative excerpts of Google's Google Play Music source code[35] related to the aforementioned ██████████ ██

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Claim 18	Accused Instrumentalities
	○ ▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓ Sonos further incorporates by reference Google's response to Sonos's Fact Discovery Interrogatory Nos. 14-15, including any of Google's documents or source code cited therein. *See* Google LLC's First Objections and Responses to Plaintiff Sonos, Inc.'s First Set of Fact Discovery Interrogatories. ***Spotify app*** Each Cast-enabled control device installed with the Spotify app is programmed to detect a set of inputs that causes playback to be transferred from the Cast-enabled media player back to the Cast-enabled control device, as evidenced by the below screenshots:

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
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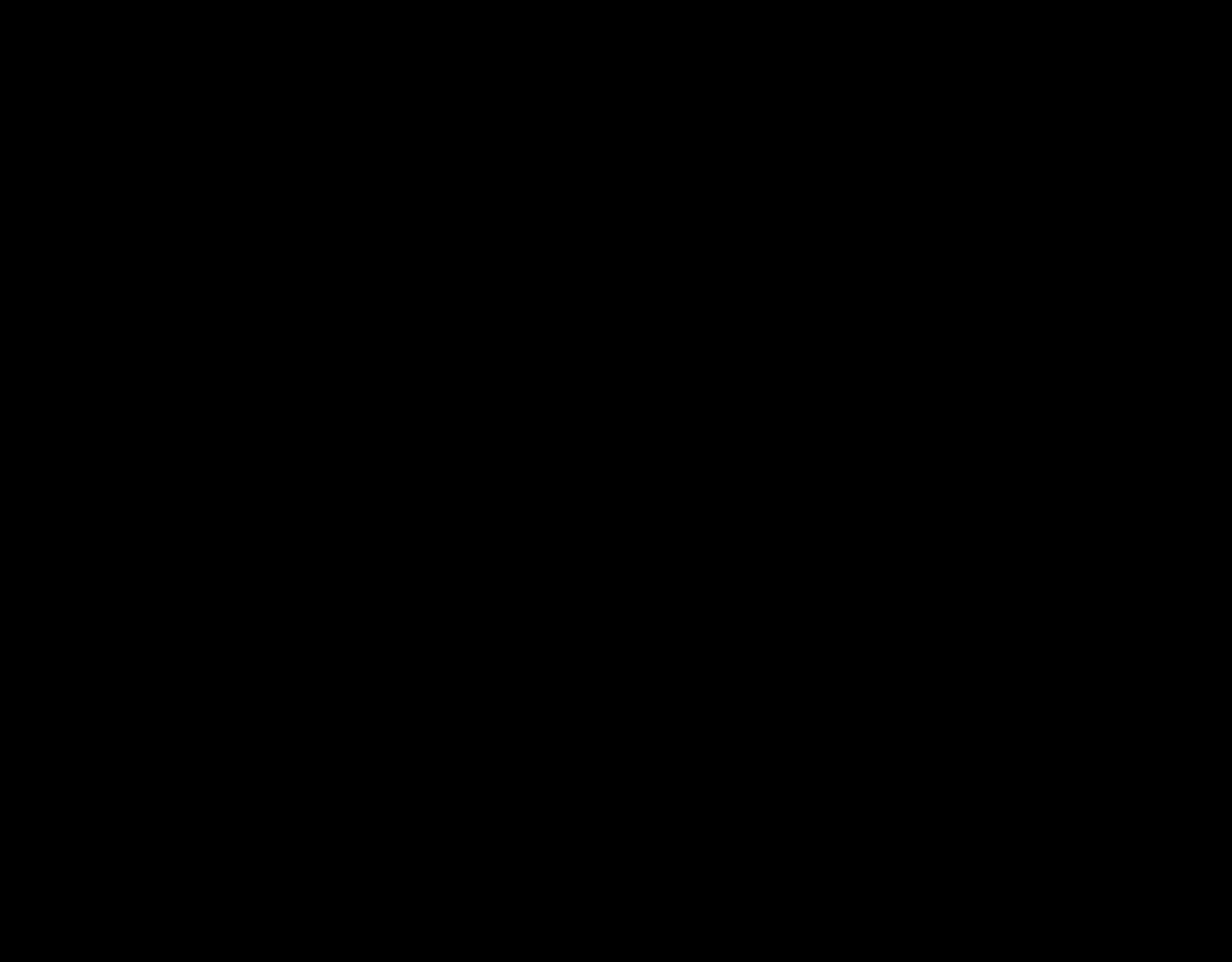| Claim 18	Accused Instrumentalities
	Sonos further incorporates by reference Google's response to Sonos's Fact Discovery Interrogatory Nos. 14-15, including any of Google's documents or source code cited therein. *See* Google LLC's First Objections and Responses to Plaintiff Sonos, Inc.'s First Set of Fact Discovery Interrogatories. ***Cast-Enabled Displays*** Each Cast-enabled display is programmed to detect a set of inputs that causes playback to be transferred from the Cast-enabled media player back to the Cast-enabled display, as evidenced by the below screenshots:

Ex. A –Infringement Contention Chart: U.S. Patent No. 9,967,615
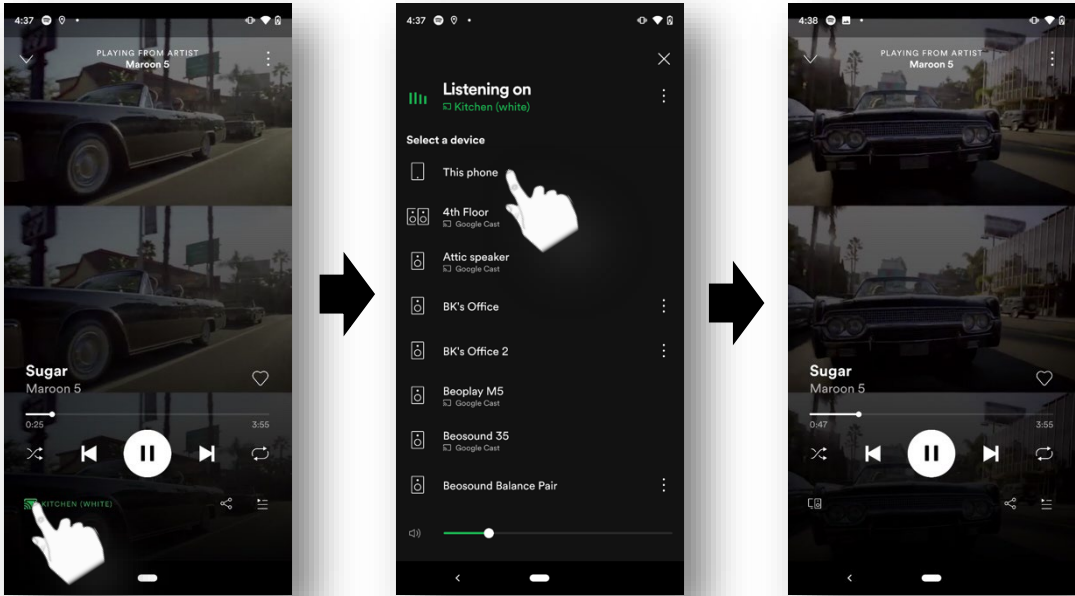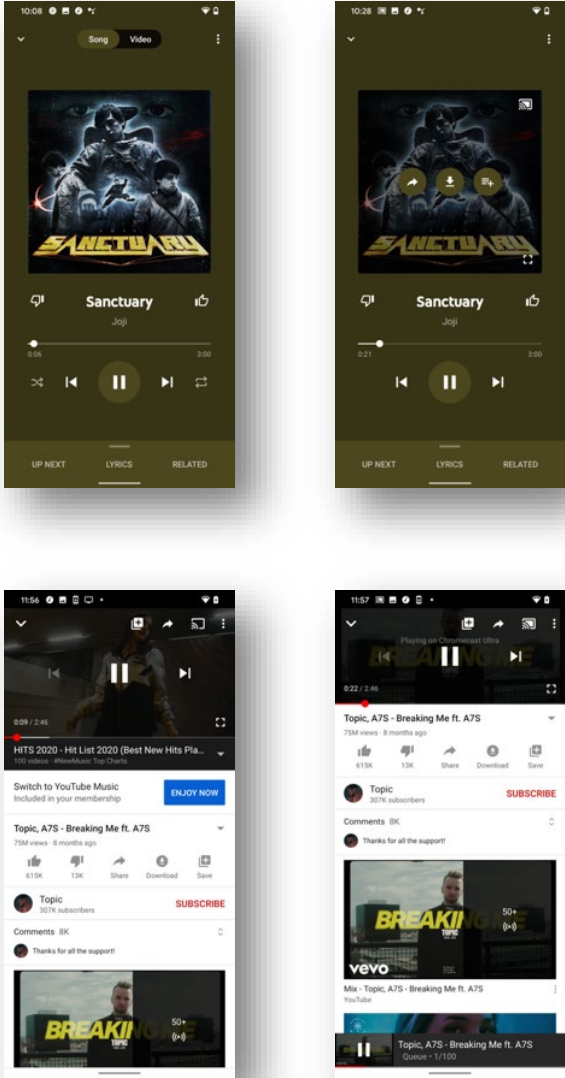**HIGHLY CONFIDENTIAL - SOURCE CODE - ATTORNEYS' EYES ONLY**

Claim 18	Accused Instrumentalities
	Sonos further incorporates by reference Google's response to Sonos's Fact Discovery Interrogatory Nos. 14-15, including any of Google's documents or source code cited therein. *See* Google LLC's First Objections and Responses to Plaintiff Sonos, Inc.'s First Set of Fact Discovery Interrogatories.

Claim 19	Accused Instrumentalities
[19.0] The tangible, non-transitory computer readable medium of claim 13, [19.1] wherein causing the graphical interface to display the control interface including one or more transport controls to control playback by the control device comprises causing the graphical interface to display a control interface that includes the one or more transport controls in a particular arrangement on the graphical interface, and [19.2] wherein modifying the one or more transport	As described above, each Cast-enabled control device and each Cast-enabled app download server comprises a "tangible, non-transitory computer-readable storage medium," as recited in claim 13. Moreover, in accordance with the executable instructions, each Cast-enabled control device is programmed such that, (i) causing the graphical interface to display the control interface including one or more transport controls to control playback by the Cast-enabled control device comprises causing the graphical interface to display a control interface that includes the one or more transport controls in a particular arrangement on the graphical interface, and (ii) modifying the one or more transport controls of the control interface to control playback by the Cast-enabled media player comprises causing the graphical interface to display the one or more transport controls to control playback by the Cast-enabled media player in the particular arrangement. For instance each Cast-enabled control device is programmed such that (i) causing the graphical interface to display the control interface including one or more transport controls (███████████████████.) to control playback by the Cast-enabled control device comprises causing the graphical interface to display a control interface that includes the one or more transport controls in a particular arrangement on the graphical interface, and (ii) modifying the one or more transport controls of the control interface to control playback by the at least one particular Cast-enabled media player rather than playback by the Cast-enabled control device comprises causing the graphical interface to display the one or more transport controls to control playback by the at least one particular Cast-enabled media player in the same particular arrangement. *See, e.g.,* https://support.google.com/googlenest/answer/7181830 [Play media from Chromecast-enabled apps to your speaker or display] ("You can even use your mobile device or tablet as a remote and control everything from playback to volume."); https://support.google.com/chromecast/answer/6279384?hl=en [Cast audio from Chromecast-enabled apps to speakers]; https://support.google.com/chromecast/answer/2995235?hl=en-AU [Cast from the YouTube app and YouTube.com] ("To play, pause or navigate with the scrollbar, use your device as you normally would to control playback."); http://web.archive.org/web/20200927211448/https://support.google.com/chromecast/answer/6178107 [Listen to music with Google Play Music and Chromecast] ("Using your phone or tablet: [ ]You can use the playback controls on the Google Play Music app . . . Using your computer: [ ] You can use the playback controls on

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Claim 19	Accused Instrumentalities
controls of the control interface to control playback by the playback device comprises causing the graphical interface to display the one or more transport controls to control playback by the playback device in the particular arrangement.	Google Play Music, near the bottom of the screen."); https://support.google.com/googlenest/answer/9563059?hl=en-IN [Move media from one cast device to another]; https://support.google.com/chromecast/answer/3265953?hl=en [Chromecast-enabled site vs. casting a tab]. Cast-enabled computing devices installed with various of Google's own Cast-enabled apps are programmed to perform this functionality, including but not limited to the YouTube, YouTube Music, YouTube TV, YouTube Kids, and Google Play Music apps, as illustrated by the following screenshots, where each screenshot on the left illustrates a particular arrangement of transport controls on a graphical interface displayed by a Cast-enabled computing device during a time when the Cast-enabled computing device is configured for playback of multimedia content and each screenshot on the right illustrates the same particular arrangement of transport controls on the graphical interface displayed by the Cast-enabled computing device after playback has been transferred to a Cast-enabled media player and the Cast-enabled computing device is configured to control playback by the Cast-enabled media player:

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Claim 19	Accused Instrumentalities

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Claim 19	Accused Instrumentalities
	  Likewise, Cast-enabled computing devices installed with various third-party Cast-enabled apps are also programmed to perform this functionality, including but not limited to the Spotify app, as illustrated by the following screenshots, where the screenshot on the left illustrates a particular arrangement of transport controls on a graphical interface displayed by a Cast-enabled computing device during a time when the Cast-enabled computing device is configured for playback of multimedia content and the screenshot on the right

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Claim 19	Accused Instrumentalities
	illustrates the same particular arrangement of transport controls on the graphical interface displayed by the Cast-enabled computing device after playback has been transferred to a Cast-enabled media player and the Cast-enabled computing device is configured to control playback by the Cast-enabled media player: Various other Cast-enabled apps available for installation on Cast-enabled computing devices provide similar functionality. *See, e.g.,* https://support.google.com/chromecast/answer/6279384?hl=en [Cast audio from Chromecast-enabled apps to speakers]; https://www.google.com/chromecast/built-in/apps/. Cast-enabled displays installed with various of Google's own Cast-enabled apps are also programmed to perform this functionality, including but not limited to the YouTube, YouTube Music, and Google Play Music apps, as illustrated by the following photos, where each photo on the left illustrates a particular arrangement of one or more transport controls on a graphical interface displayed by a Cast-enabled display during a time when the Cast-enabled display is configured for playback of multimedia content and each photo on the right illustrates the same particular arrangement of the one or more transport controls on the graphical interface displayed by the Cast-enabled display after playback has been transferred to a Cast-enabled media player and the Cast-enabled display is configured to control playback by the Cast-enabled media player:

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Claim 19	Accused Instrumentalities
	Additionally, Cast-enabled displays installed with various third-party Cast-enabled apps are also programmed to perform this functionality, including but not limited to the Spotify app, as illustrated by the following photos, where the photo on the left illustrates a particular arrangement of transport controls on a graphical interface displayed by a Cast-enabled display during a time when the Cast-enabled display is configured for playback of multimedia content and the photo on the right illustrates the same particular arrangement of transport controls on the graphical interface displayed by the Cast-enabled display after playback has been transferred to a Cast-enabled media player and the Cast-enabled display is configured to control playback by the Cast-enabled media player: Various other Cast-enabled apps available for installation on Cast-enabled displays provide similar functionality.

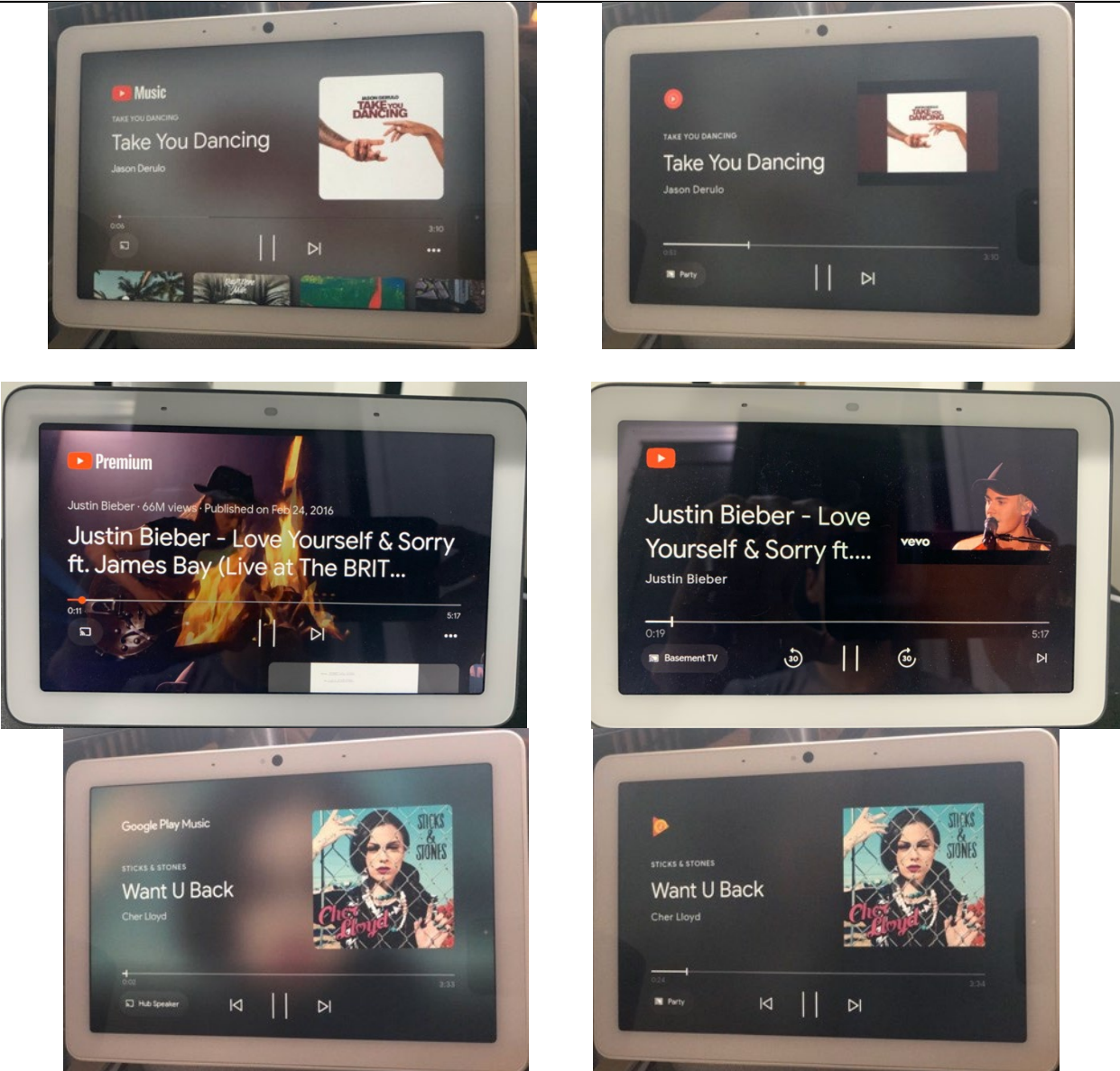| Claim 20	Accused Instrumentalities
[20.0] The tangible, non-transitory computer readable medium of claim 13, **[20.1]** wherein causing the one or more first cloud servers to add multimedia content	As described above, each Cast-enabled control device and each Cast-enabled app download server comprises a "tangible, non-transitory computer-readable storage medium," as recited in claim 13. Moreover, in accordance with the executable instructions, each Cast-enabled control device is programmed such that causing the one or more first cloud servers to add multimedia content to the local playback queue on the particular Cast-enabled media player comprises causing an identifier of the multimedia content to be added to the local playback queue. For instance, each Cast-enabled control device is programmed such that causing a first cloud server that is remote from the Cast-enabled computing device and the at least one particular Cast-enabled media player and

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Claim 20	Accused Instrumentalities
to the local playback queue on the particular playback device comprises causing an identifier of the multimedia content to be added to the local playback queue,	accessible over the Internet (e.g., a first cloud server that is operated by either Google or a third-party service provider) to add multimedia content to a local playback queue of the particular Cast-enabled media player comprises causing a resource locator that takes the form of an identifier of the multimedia content to be added to the local playback queue. *See, e.g.*, https://support.google.com/googlenest/answer/7181830 [Play media from Chromecast-enabled apps to your speaker or display]; https://support.google.com/chromecast/answer/6279384?hl=en [Cast audio from Chromecast-enabled apps to speakers]; https://support.google.com/chromecast/answer/2995235?hl=en-AU [Cast from the YouTube app and YouTube.com]; https://support.google.com/youtubetv/answer/7353493?co=GENIE.Platform%3DAndroid&hl=en [Cast YouTube TV using Chromecast]; https://support.google.com/youtubekids/answer/6289408?hl=en&co=GENIE.Platform%3DAndroid [Watch YouTube Kids videos on your TV]; http://web.archive.org/web/20200927211448/https://support.google.com/chromecast/answer/6178107 [Listen to music with Google Play Music and Chromecast]; https://support.google.com/googlenest/answer/9563059?hl=en-IN [Move media from one cast device to another]; https://developers.google.com/cast/docs/web_receiver/queueing; https://developers.google.com/cast/docs/ios_sender/queueing; https://developers.google.com/cast/docs/android_sender/queueing. Further details regarding how a Cast-enabled control device carries out this functionality, along with representative examples of evidence demonstrating this functionality, are summarized below. ***YouTube, YouTube Music, YouTube TV, & YouTube Kids apps*** As explained above, each Cast-enabled computing device installed with any one of the YouTube, YouTube Music, YouTube TV, or YouTube Kids app is programmed such that, after detecting a set of inputs to transfer the Cast-enabled computing device's playback of multimedia content to at least one particular Cast-enabled media player, the Cast-enabled computing device performs a variety of functions to transfer playback from the Cast-enabled computing device to the particular Cast-enabled media player. One such function involves the transmission of a ██ to add one or more media-item identifiers ██████████████████████████████████") to the particular Cast-enabled media player's local playback queue. *See* claim limitations 13.5-13.6. The

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Claim 20	Accused Instrumentalities
	aforementioned functionality satisfies claim limitation 20.1. ██████████ ██ ***Google Play Music app*** As explained above, each Cast-enabled computing device installed with the Google Play Music app is programmed such that, after detecting a set of inputs to transfer the Cast-enabled computing device's playback of multimedia content to at least one particular Cast-enabled media player, the Cast-enabled computing device performs a variety of functions to transfer playback from the Cast-enabled computing device to the particular Cast-enabled media player. ██████████ ███ ***Spotify app*** Each Cast-enabled control device installed with the Spotify app (which is Cast-enabled and utilizes the Cast SDK) is programmed such that, after detecting a set of inputs to transfer the Cast-enabled computing device's playback of multimedia content to at least one particular Cast-enabled media player, the Cast-enabled computing device performs a variety of functions to transfer playback from the Cast-enabled computing device to the particular Cast-enabled media player. █████████ ███████████

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Claim 20	Accused Instrumentalities
	██ ████████████████████████████████████ *See* claim limitations 13.5-13.6. The aforementioned functionality satisfies claim limitation 20.1. ***Cast-Enabled Displays*** Each Cast-enabled display is programmed such that, after detecting a set of inputs to transfer the Cast-enabled display's playback of multimedia content to at least one particular Cast-enabled media player, the Cast-enabled display performs a variety of functions to transfer playback from the Cast-enabled display to the particular Cast-enabled media player. ████████████████████████████ ██ ██ ████████████████████████████████████ *See* claim limitations 13.5-13.6. The aforementioned functionality satisfies claim limitation 20.1.
[20.2] wherein the identifier indicates a particular source of the multimedia content at the one or more second cloud servers of the streaming content service,	In accordance with the executable instructions, each Cast-enabled control device is programmed with the capability to perform the aforementioned functions where the identifier indicates a particular source of the multimedia content at the one or more second cloud servers of the streaming content service. For instance, each Cast-enabled control device is programmed with the capability to perform the aforementioned functions where the identifier of the multimedia content to be added to the local playback queue indicates a source location of the multimedia content at a second cloud server of the streaming content service that is remote from the particular Cast-enabled media player and accessible over the Internet (████████ ██. *See, e.g.,* https://support.google.com/googlenest/answer/7181830 [Play media from Chromecast-enabled apps to your speaker or display]; https://support.google.com/chromecast/answer/6279384?hl=en [Cast audio from Chromecast-enabled apps to speakers]; https://support.google.com/chromecast/answer/2995235?hl=en-AU [Cast from the YouTube app and YouTube.com]; https://support.google.com/youtubetv/answer/7353493?co=GENIE.Platform%3DAndroid&hl=en [Cast YouTube TV using Chromecast];

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	https://support.google.com/youtubekids/answer/6289408?hl=en&co=GENIE.Platform%3DAndroid [Watch YouTube Kids videos on your TV]; http://web.archive.org/web/20200927211448/https://support.google.com/chromecast/answer/6178107 [Listen to music with Google Play Music and Chromecast]; https://support.google.com/googlenest/answer/9563059?hl=en-IN [Move media from one cast device to another]; https://developers.google.com/cast/docs/web_receiver/queueing; https://developers.google.com/cast/docs/ios_sender/queueing; https://developers.google.com/cast/docs/android_sender/queueing; https://developers.google.com/cast/docs/reference/web_sender/chrome.cast.media.MediaInfo. Representative examples of evidence demonstrating this functionality are summarized below. ***YouTube, YouTube Music, YouTube TV, & YouTube Kids apps*** As explained above, a Cast-enabled computing device installed with any one of the YouTube, YouTube Music, YouTube TV, or YouTube Kids app is programmed to transmit a ▮▮▮▮▮▮▮▮▮ ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮ Sonos further incorporates by reference Google's response to Sonos's Fact Discovery Interrogatory Nos. 14-15, including any of Google's documents or source code cited therein. *See* Google LLC's First Objections and Responses to Plaintiff Sonos, Inc.'s First Set of Fact Discovery Interrogatories. ***Google Play Music app***

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Claim 20	Accused Instrumentalities
	As explained above, a Cast-enabled computing device with installed the Google Play Music app is programmed to cause the particular Cast-enabled media player to contact the Google Play Music queue server for one or more ███ Sonos further incorporates by reference Google's response to Sonos's Fact Discovery Interrogatory Nos. 14-15, including any of Google's documents or source code cited therein. *See* Google LLC's First Objections and Responses to Plaintiff Sonos, Inc.'s First Set of Fact Discovery Interrogatories. ***Spotify app*** As explained above, a Cast-enabled computing device installed with the Spotify app is programmed to cause the particular Cast-enabled media player to contact a cloud server managing a remote queue (██████████████), which causes the cloud server to add one or more media-item identifiers ████████████████████") from the remote queue to the particular Cast-enabled media player's local playback queue, and each of these identifiers indicates a particular source of the multimedia content at one or more cloud servers that differ from the cloud server managing the remote queue. *See* claim limitation 13.7; https://developers.google.com/cast/docs/reference/web_sender/chrome.cast.media.MediaInfo ("contentId" "[i]dentifies the content. Typically a URL . . . ."). Sonos further incorporates by reference Google's response to Sonos's Fact Discovery Interrogatory Nos. 14-15, including any of Google's documents or source code cited therein. *See* Google LLC's First Objections and Responses to Plaintiff Sonos, Inc.'s First Set of Fact Discovery Interrogatories. ***Cast-Enabled Displays***

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Claim 20	Accused Instrumentalities
	Each Cast-enabled display is programmed to transfer the state of the Cast-enabled display's current playback session to the particular Cast-enabled media player ███████████████ ██ ██ ██ ██ https://developers.google.com/cast/docs/reference/web_sender/chrome.cast.media.MediaInfo [Class: MediaInfo]. Sonos further incorporates by reference Google's response to Sonos's Fact Discovery Interrogatory Nos. 14-15, including any of Google's documents or source code cited therein. *See* Google LLC's First Objections and Responses to Plaintiff Sonos, Inc.'s First Set of Fact Discovery Interrogatories.
[20.3] wherein the particular playback device receives the multimedia content from the particular source at the one or more second cloud servers of the streaming content service.	In accordance with the executable instructions, each Cast-enabled control device is programmed with the capability to perform the aforementioned functions where the particular Cast-enabled media player receives the multimedia content from the particular source at the one or more second cloud servers of the streaming content service. For instance, each Cast-enabled control device is programmed with the capability to perform the aforementioned functions where a particular Cast-enabled media player receives the multimedia content to be added to the local playback queue from the source location of the multimedia content at a second cloud server of the streaming content service that is remote from the particular Cast-enabled media player and accessible over the Internet (e.g., a second cloud server that is operated by either Google or a third-party service provider). *See, e.g.,* https://support.google.com/googlenest/answer/7181830 [Play media from Chromecast-enabled apps to your speaker or display]; https://support.google.com/chromecast/answer/6279384?hl=en [Cast audio from Chromecast-enabled apps to speakers]; https://support.google.com/chromecast/answer/2995235?hl=en-AU [Cast from the YouTube app and YouTube.com]; https://support.google.com/youtubetv/answer/7353493?co=GENIE.Platform%3DAndroid&hl=en [Cast YouTube TV using Chromecast];

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Claim 20	Accused Instrumentalities
	https://support.google.com/youtubekids/answer/6289408?hl=en&co=GENIE.Platform%3DAndroid [Watch YouTube Kids videos on your TV]; http://web.archive.org/web/20200927211448/https://support.google.com/chromecast/answer/6178107 [Listen to music with Google Play Music and Chromecast]; https://support.google.com/googlenest/answer/9563059?hl=en-IN [Move media from one cast device to another]; https://developers.google.com/cast/docs/web_receiver/queueing; https://developers.google.com/cast/docs/ios_sender/queueing; https://developers.google.com/cast/docs/android_sender/queueing; https://developers.google.com/cast/docs/reference/web_sender/chrome.cast.media.MediaInfo; https://cloud.google.com/cdn/docs/overview [Cloud CDN overview]. Representative examples of evidence demonstrating this functionality are summarized below. ***YouTube, YouTube Music, YouTube TV, & YouTube Kids apps*** As explained above, when the particular Cast-enabled media player plays back multimedia content from the YouTube, YouTube Music, YouTube TV, or YouTube Kids service, this involves the particular Cast-enabled media player retrieving the multimedia content from one or more cloud servers that ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮ ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮) and then playing back the retrieved multimedia content. *See* claim limitation 13.7. ***Google Play Music app*** As explained above, when the particular Cast-enabled media player plays back multimedia content from the Google Play Music service, this involves the particular Cast-enabled media player retrieving the multimedia content from one or more cloud servers that differ from the Google Play Music queue server ▮▮▮▮▮▮ ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮). *See* claim limitation 13.7. ***Spotify app*** As explained above, when the particular Cast-enabled media player plays back multimedia content from the Spotify service, this involves the particular Cast-enabled media player retrieving the multimedia content from

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Claim 20	Accused Instrumentalities
	one or more cloud servers that differ from the cloud server managing the remote queue (███████████ ███). *See* claim limitation 13.7. ***Cast-Enabled Displays*** As explained above, when the particular Cast-enabled media player plays back multimedia content from the same streaming content service that the Cast-enabled display was playing back from when it detected the set of inputs, this involves the particular Cast-enabled media player retrieving the multimedia content from one or more cloud servers that differ from the cloud server managing the remote queue. *See* claim limitation 13.7.

Claim 21	Accused Instrumentalities
[21.0] The tangible, non-transitory computer readable medium of claim 13, **[21.1]** wherein causing one or more first cloud servers to add the multimedia content to the local playback queue on the particular playback device comprises sending a message to the streaming content service that causes the one or more first cloud servers to add the multimedia content	As described above, each Cast-enabled control device and each Cast-enabled download server comprises a "tangible, non-transitory computer-readable storage medium," as recited in claim 13. Moreover, in accordance with the executable instructions, each Cast-enabled control device is programmed such that causing one or more first cloud servers to add the multimedia content to the local playback queue on the particular Cast-enabled media player comprises sending a message to the streaming content service that causes the one or more first cloud servers to add the multimedia content to the local playback queue on the particular Cast-enabled media player. For instance, a Cast-enabled control device installed with at least some of the Cast-enabled apps discussed above is programmed such that the function of causing a first cloud server that is remote from the Cast-enabled computing device and the at least one particular Cast-enabled media player and accessible over the Internet (e.g., a first cloud server that is operated by either Google or a third-party service provider) to add resource locators for multimedia content to a local playback queue of the particular Cast-enabled media player involves the Cast-enabled control device sending a message to the streaming content service that causes the first cloud server (e.g., a first cloud server that is operated by either Google or a third-party service provider) to add the multimedia content to the local playback queue on the particular Cast-enabled media player. *See, e.g.,* https://support.google.com/googlenest/answer/7181830 [Play media from Chromecast-enabled apps to your speaker or display]; https://support.google.com/chromecast/answer/6279384?hl=en [Cast audio from Chromecast-enabled apps to speakers]; https://support.google.com/chromecast/answer/2995235?hl=en-AU [Cast from the YouTube app and YouTube.com];

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Claim 21	Accused Instrumentalities
to the local playback queue on the particular playback device.	https://support.google.com/youtubetv/answer/7353493?co=GENIE.Platform%3DAndroid&hl=en [Cast YouTube TV using Chromecast]; https://support.google.com/googlenest/answer/9563059?hl=en-IN [Move media from one cast device to another]; https://developers.google.com/cast/docs/web_receiver/queueing; https://developers.google.com/cast/docs/ios_sender/queueing; https://developers.google.com/cast/docs/android_sender/queueing. For example, as explained above, a Cast-enabled computing device installed with any one of the YouTube, YouTube Music, YouTube TV, or YouTube Kids app is programmed such that, after detecting a set of inputs to transfer the Cast-enabled computing device's playback of multimedia content to at least one particular Cast-enabled media player, the Cast-enabled computing device performs a variety of functions to transfer playback from the Cast-enabled computing device to the particular Cast-enabled media player. *See* claim limitations 13.5-13.6. ██ *See* claim limitations 13.5-13.6. The aforementioned functionality satisfies claim limitation 21.1. Sonos further incorporates by reference Google's response to Sonos's Fact Discovery Interrogatory Nos. 14-15, including any of Google's documents or source code cited therein. *See* Google LLC's First Objections and Responses to Plaintiff Sonos, Inc.'s First Set of Fact Discovery Interrogatories.

Claim 25	Accused Instrumentalities
[25.0] A control device comprising:	Google's "Cast" technology enables an "Android, iOS, or Web app to direct its streaming video and audio to a TV or sound system," where the app "becomes the remote control to play, pause, seek, rewind, stop, and otherwise control the media." https://developers.google.com/cast. In Google's "Cast" framework, there are two core categories of devices: (1) "sender" devices, which are computing devices installed with a Cast-enabled Android, iOS, Chrome, or browser-based app accessed via either an app store or Chromecast-enabled site URL[37] (including youtube.com, music.youtube.com, tv.youtube.com, and spotify.com), and (2) "receiver" devices, which are Cast-enabled media players such as an audio or video playback device. *See,*

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[37] *See, e.g.,* https://support.google.com/chromecast/answer/3265953?hl=en.

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Claim 25	Accused Instrumentalities
	e.g., https://developers.google.com/cast/docs/developers; https://developers.google.com/cast/glossary; https://developers.google.com/cast/docs/ux_guidelines. There are many different Cast-enabled Android, iOS, Chrome, or browser-based apps that allow a user to transfer playback of streaming media content from the user's smartphone, tablet, or computer device to a Cast-enabled media player and then control the Cast-enabled media player's playback using the Cast-enabled app. This includes Google's own Cast-enabled apps, such as the YouTube Music app, the Google Play Music app, the YouTube app, the YouTube TV app, and the YouTube Kids app, as well as a host of different third-party Cast-enabled apps, such as the Spotify app. *See, e.g.,* https://support.google.com/chromecast/answer/6279384?hl=en; https://www.google.com/chromecast/built-in/apps/. These Cast-enabled apps can be installed and run on any smartphone, tablet, or computer device that supports Android, iOS, Chrome, or browser-based apps, including Google's own "Pixel" smartphone, tablet, and computer devices (*e.g.*, the Pixel, Pixel XL, Pixel 2, Pixel 2 XL, Pixel 3, Pixel 3 XL, Pixel 3a, Pixel 3a XL, Pixel 4, Pixel 4 XL, Pixel 4a, Pixel 4a (5G), Pixel 5, Pixel 5a (5G), Pixel 6 phones, the Pixel Slate tablet, and the Pixelbook and Pixelbook Go laptops) as well as many third-party smartphone, tablet, or computer device. *See, e.g.,* https://store.google.com/us/magazine/compare_pixel; https://store.google.com/us/product/google_pixelbook_specs; https://store.google.com/us/product/pixel_slate_specs. For purposes of this chart, any smartphone, tablet, or computer device installed with a Cast-enabled Android, iOS, Chrome, or browser-based app (e.g., accessed via an app store or Chromecast-enabled site URL) that allows a user to transfer playback of streaming media content from the smartphone, tablet, or computer device to a Cast-enabled media player and then control the Cast-enabled media player's playback using the Cast-enabled app will be referred to as a "Cast-enabled computing device." As set out in the Supplemental Infringement Contentions, Sonos has endeavored to list the possible third-party smartphone, tablet, and computer devices that may have been used to download and install one or more accused Cast-enabled apps between May 2018 to present. *See* Appx. 1. Each of these third-party smartphone, tablet, and computer devices, when installed with at least one Cast-enabled app, meets all elements of the claims as explained in more detail herein. As set forth below, Sonos cites representative examples of Google smartphone, tablet, and computer devices meeting elements 25.1, 25.2, 25.3, and 25.4, but notes that the hardware aspects recited in elements 25.1, 25.2, 25.3, and 25.4 have become ubiquitous among all smartphone, tablet, and computer devices. Each possible third-party smartphone, tablet, and

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Claim 25	Accused Instrumentalities
	computer device listed in Appendix 1 contains these aspects and thus meets elements 25.1, 25.2, 25.3, and 25.4. There are also many different Cast-enabled media players to which playback of streaming media content can be transferred from a Cast-enabled computing device. This includes Google's own Cast-enabled media players, such as the Home Mini, Nest Mini, Home, Home Max, Home Hub, Nest Hub, Nest Hub Max, Nest Wifi Point, Chromecast, Chromecast Audio, Chromecast Ultra, Chromecast with Google TV, and Nest Audio media players, as well as various other third-party media players with built-in Cast functionality. *See, e.g.,* https://store.google.com/us/product/google_home_max?hl=en-US; https://store.google.com/us/product/chromecast_google_tv_compare?hl=en-US; https://www.google.com/chromecast/built-in/audio/. Certain of these Cast-enabled media players also include a display screen and firmware that enables the Cast-enabled media players to additionally function as a control device for other Cast-enabled media players. This sub-category of Cast-enabled media players, which will be referred to herein as "Cast-enabled displays," includes Google's Home Hub, Nest Hub, and Nest Hub Max media players. *See, e.g.,* https://store.google.com/us/product/google_nest_hub?hl=en-US#overview-modal-music; https://store.google.com/us/product/google_nest_hub_max?hl=en-US; https://support.google.com/googlenest/answer/9165738?hl=en-GB&ref_topic=7030084. Similar to the Cast-enabled computing devices, these Cast-enabled displays have Cast-enabled software (e.g., firmware and/or Cast-enabled apps) that allows a user to transfer playback of streaming media content from the Cast-enabled display to another Cast-enabled media player and then control that other Cast-enabled media player's playback using the Cast-enabled display's user interface. For purposes of this chart, Cast-enabled computing devices and Cast-enabled displays may be referred to collectively as "Cast-enabled control devices." Google also hosts backend software on Cloud-based infrastructure owned and/or operated by Google (sometimes referred to as Google Cloud Platform or "GCP" for short) that facilitates the aforementioned Cast functionality for transferring playback of streaming media content from a Cast-enabled control device to a Cast-enabled media player and/or controlling the Cast-enabled media player's playback. As described in further detail below, each Cast-enabled control device is a "control device" as recited in claim 25. Further, because each Cast-enabled media player is a data network device (*i.e.*, a device that is

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Claim 25	Accused Instrumentalities
	configured to connect to and communicate over a medium that interconnects devices in a manner that enables them to send digital data packets to and receive digital data packets from each other) and is configured to process and output audio, each Cast-enabled media player is a "playback device" as recited in claim 25. *See, e.g.*, Pl.'s Opening Markman Br. (D.I. 60 of 20-cv-881-ADA) at pp. 4-6, 23-26, Exs. 24-25; Pl.'s Reply Markman Br. (D.I. 66 of 20-cv-881-ADA) at pp. 2-3, 10-12, Exs. 26-27; SONOS-SVG2-00018184 - SONOS-SVG2-00018236 [ITC Order No. 20] at p. 15; https://support.google.com/googlenest/answer/7072284?hl=en; https://support.google.com/chromecast/answer/3046409?hl=en; https://store.google.com/us/product/nest_wifi_specs?hl=en-US.
[25.1] a graphical interface;	Each Cast-enabled control device comprises a graphical interface. *See, e.g.,* https://store.google.com/us/magazine/compare_pixel; https://store.google.com/us/product/google_pixelbook_specs; https://store.google.com/us/product/pixel_slate_specs; https://store.google.com/us/product/google_home_max?hl=en-US.
[25.2] a wireless communication interface to communicate with a playback device;	Each Cast-enabled control device comprises a wireless communication interface, such as a Wi-Fi interface, to communicate with a Cast-enabled media player. *See, e.g.,* https://store.google.com/us/magazine/compare_pixel; https://store.google.com/us/product/google_pixelbook_specs; https://store.google.com/us/product/pixel_slate_specs; https://store.google.com/us/product/google_home_max?hl=en-US.
[25.3] one or more processors;	Each Cast-enabled control device comprises one or more processors. *See, e.g.,* https://store.google.com/us/magazine/compare_pixel; https://store.google.com/us/product/google_pixelbook_specs; https://store.google.com/us/product/pixel_slate_specs; https://store.google.com/us/product/google_home_max?hl=en-US.
[25.4] tangible non-transitory computer-readable media having instructions encoded therein, wherein the	Each Cast-enabled control device comprises tangible non-transitory computer-readable media having instructions encoded therein, where the instructions, when executed by the Cast-enabled control device's one or more processors, cause the Cast-enabled control device to perform the functions identified below. *See, e.g.,* https://store.google.com/us/magazine/compare_pixel; https://store.google.com/us/product/google_pixelbook_specs; https://store.google.com/us/product/pixel_slate_specs; https://store.google.com/us/product/google_home_max?hl=en-US.

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Claim 25	Accused Instrumentalities
instructions, when executed by the one or more processors, cause the control device to perform functions comprising:	
[25.5] causing the graphical interface to display a control interface including one or more transport controls to control playback by the control device;	Each Cast-enabled control device's tangible non-transitory computer-readable media has instructions encoded therein that, when executed by a Cast-enabled control device's one or more processors, cause its graphical interface to display a control interface including one or more transport controls to control playback by the Cast-enabled control device. *See* claim limitation 13.1.
[25.6] after connecting to a local area network via the wireless communication interface, identifying playback devices connected to the local area network;	Each Cast-enabled control device's tangible non-transitory computer-readable media has instructions encoded therein that, when executed by a Cast-enabled control device's one or more processors, cause that Cast-enabled control device to, after connecting to a local area network ("LAN") via the wireless communication interface, identify Cast-enabled media players connected to the LAN. *See* claim limitation 13.2.
[25.7] causing the graphical interface to display a selectable option for transferring playback from the control device;	Each Cast-enabled control device's tangible non-transitory computer-readable media has instructions encoded therein that, when executed by a Cast-enabled control device's one or more processors, cause its graphical interface to display a selectable option for transferring playback from the Cast-enabled control device. *See* claim limitation 13.3.

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Claim 25	Accused Instrumentalities
[25.8] detecting a set of inputs to transfer playback from the control device to a particular playback device, wherein the set of inputs comprises: (i) a selection of the selectable option for transferring playback from the control device and (ii) a selection of the particular playback device from the identified playback devices connected to the local area network:	Each Cast-enabled control device's tangible non-transitory computer-readable media has instructions encoded therein that, when executed by a Cast-enabled control device's one or more processors, cause that Cast-enabled control device to detect a set of inputs to transfer playback from the Cast-enabled control device to a particular Cast-enabled media player, where the set of inputs comprises: (i) a selection of the selectable option for transferring playback from the Cast-enabled control device and (ii) a selection of the particular Cast-enabled media player from the identified Cast-enabled media players connected to the LAN. *See* claim limitation 13.4.
[25.9] after detecting the set of inputs to transfer playback from the control device to the particular playback device, causing playback to be transferred from the control device	Each Cast-enabled control device's tangible non-transitory computer-readable media has instructions encoded therein that, when executed by a Cast-enabled control device's one or more processors, cause that Cast-enabled control device to, after detecting the set of inputs to transfer playback from the Cast-enabled control device to the particular Cast-enabled media player, cause playback to be transferred from the Cast-enabled control device to the particular Cast-enabled media player. *See* claim limitation 13.5.

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Claim 25	Accused Instrumentalities
to the particular playback device,	
[25.10] wherein transferring playback from the control device to the particular playback device comprises: (a) causing one or more first cloud servers to add multimedia content to a local playback queue on the particular playback device, wherein adding the multimedia content to the local playback queue comprises the one or more first cloud servers adding, to the local playback queue, one or more resource locators corresponding to respective locations of the multimedia content at one or more second cloud	Each Cast-enabled control device is programmed such that transferring playback to the particular Cast-enabled media player comprises: (a) causing one or more first cloud servers to add multimedia content to a local playback queue on the particular Cast-enabled media player, where adding the multimedia content to the local playback queue comprises the one or more first cloud servers adding, to the local playback queue, one or more resource locators corresponding to respective locations of the multimedia content at one or more second cloud servers of a streaming content service, (b) causing playback at the Cast-enabled control device to be stopped, and (c) modifying the one or more transport controls of the control interface to control playback by the Cast-enabled media player. *See* claim limitation 13.6.

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Claim 25	Accused Instrumentalities
servers of a streaming content service; (b) causing playback at the control device to be stopped; and (c) modifying the one or more transport controls of the control interface to control playback by the playback device; and	
[25.11] causing the particular playback device to play back the multimedia content, wherein the particular playback device playing back the multimedia content comprises the particular playback device retrieving the multimedia content from one or more second cloud servers of a streaming content service and playing	Each Cast-enabled control device's tangible non-transitory computer-readable media has instructions encoded therein that, when executed by a Cast-enabled control device's one or more processors, cause the particular Cast-enabled media player to play back the multimedia content, where the particular Cast-enabled media player playing back the multimedia content comprises the particular Cast-enabled media player retrieving the multimedia content from one or more second cloud servers of a streaming content service and playing back the retrieved multimedia content. *See* claim limitation 13.7.

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Claim 25	Accused Instrumentalities
back the retrieved multimedia content.	

Claim 26	Accused Instrumentalities
[26.0] The control device of claim 25, [26.1] wherein detecting the set of inputs to transfer playback from the control device to the particular playback device comprises detecting a set of inputs to transfer playback from the control device to a particular zone group of a media particular playback system that includes a first zone and a second zone,	As described above, each Cast-enabled control device is a "control device," as recited in claim 25. Moreover, each Cast-enabled control device is programmed such that detecting the set of inputs to transfer playback from the Cast-enabled control device to the particular Cast-enabled media player comprises detecting a set of inputs to transfer playback from the Cast-enabled control device to a particular zone group of a particular Cast-enabled media playback system that includes a first zone and a second zone. *See* claim limitation 15.1.
[26.2] wherein the first zone includes the particular playback device and the second zone includes at least one	Each Cast-enabled control device is programmed with the capability to perform the aforementioned functions where the first zone includes the particular Cast-enabled media player and the second zone includes at least one additional Cast-enabled media player. *See* claim limitation 15.2.

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Claim 26	Accused Instrumentalities
additional playback device,	
[26.3] wherein modifying the one or more transport controls of the control interface to control playback by the playback device comprises causing the one or more transport controls of the control interface to control playback by the particular playback device and the at least one additional playback device in synchrony, and	Each Cast-enabled control device is programmed such that modifying the one or more transport controls of the control interface to control playback by the Cast-enabled media player comprises causing the one or more transport controls of the control interface to control playback by the particular Cast-enabled media player and the at least one additional playback device in synchrony. *See* claim limitation 15.3.
[26.4] wherein the particular playback device playing back the retrieved multimedia content comprises the particular playback device and the at least one additional playback device playing back the	Each Cast-enabled control device is programmed with the capability to perform the aforementioned functions where the particular Cast-enabled media player playing back the retrieved multimedia content comprises the particular Cast-enabled media player and the at least one additional Cast-enabled media player playing back the multimedia content in synchrony. *See* claim limitation 15.4.

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Claim 26	Accused Instrumentalities
multimedia content in synchrony.	